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PREFACE.

122 A FEW words are perhaps necessary by way of introduction to the following pages.

The *Marchesa*, an auxiliary screw schooner yacht of 420 tons, Mr. C. T. Kettlewell captain and owner, was commissioned in the Clyde in November, 1881, and left Cowes on the 8th of January following. She reached Colombo April 24th, having touched at Socotra and Oolegaum Island, one of the Maldive group, on her way from Aden. From Ceylon she proceeded *viâ* Singapore to Formosa and the Liu-kiu Islands, and thence to Japan. She left Yokohama for Kamschatka July 29th, returning thither from the north on the 6th of October. On the second visit to Japan four months were spent in the country, and the yacht then proceeded for a six weeks' cruise in Chinese waters. Leaving Hongkong at the end of March, 1883, some weeks were devoted to exploring the little-known islands of the Sulu Archipelago, and to visiting the territory of the North Borneo Company. The *Marchesa* then returned to Singapore to take in stores, and proceeded *viâ* Sumbawa, Celebes, and various other islands of the Malay Archipelago to New Guinea. In her homeward voyage she again visited the Straits Settlements and Ceylon, and calling at Bombay, finally reached Southampton April 14th, 1884.

000 To such countries as Ceylon and Japan, and others which lie in the beaten path of the tourist round the world, I have not thought it necessary to allude, confining myself entirely to an

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x "

000 On the afternoon of August 4th, we weighed and left the port of Hakodadi in Yezo, northward-bound for Kamschatka. We dipped our farewells to old friends of H.M.S. *Champion* and *Zephyr*, and steamed out against a fresh easterly breeze. As we proceeded the wind increased, and the weather became so thick that we resolved on running in under the lee of Cape Siwokubi, and anchoring for the night. Next morning it was clear, though still blowing strong from E.S.E.; but as we were anxious to lose no time, we put the ship under fore and aft canvas, and beat under steam and sail past Cape Yerimo, the southern point of Yezo, into the open sea. The Kurosiwo or Japanese current—the Pacific homologue of the Gulf Stream—widening as it passes the eastern coast of Japan, runs northward as far as Kamschatka, and it is to its warmth that the comparative freedom from ice of that coast is supposed to be due. Between it and the Kurile Islands is a narrow counter-current of cold water, running to the S.W. With the intention of avoiding the latter, and obtaining what advantages we could from the Kurosiwo, we resolved on shaping our course so as to keep at a uniform distance of about a hundred and fifty miles to the eastward of the Kuriles, where the current is supposed to be strongest. The result, however, was a failure. For the first two days we experienced a north-easterly set, but we had no sooner got fairly out into the presumed middle of the Kurosiwo than we encountered a southerly current. At the same time we entered the region of fog, which, during the summer, is an almost constant phenomenon of the northern part of the North Pacific. This fog apparently formed a stratum of no great depth, for, although thick enough all round us, it was often sufficiently clear overhead to enable us to get a glimpse of the sky, and although morning sights were impossible, we were always able to get a meridian or ex-meridian observation for our latitude.

133 Navigation in these lonely and misty seas presents but few points of interest even to the sailor, and it was accordingly with no little pleasure that, on the morning of the 13th of August, we

133 emerged from the fog much as a train runs out of a tunnel, and found that Kamschatka was in sight. The sharp peak of the Vilutchinska volcano enabled us to make out our position, and we steered north for Avatcha Bay. It was a magnificent morning, and as the yacht rolled heavily over a dark blue sea, on whose surface the waves broke in patches of snowy whiteness, now plunging her bows deep into the water with all the sense of pure physical enjoyment of a living creature, now shaking herself free and pouring the seas in bright streams from her scuppers, she formed a picture which might have aroused the admiration of even the most apathetic of landsmen, and one which was provided with a fitting background. Rarely have I seen a wilder-looking coast than that of south-eastern Kamschatka. The brilliant sunshine which poured upon rock and headland redeemed it from gloom, but the wildness and desolation of the scene was indescribable. Precipitous cliffs, at the foot of which none but a bird could land; deep valleys running down to the sea at whose mouths still lay the accumulated masses of last winter's snows; pinnacle rocks like rows of iron teeth shown to warn off any one rash enough to contemplate a landing,—this was what met our gaze as we anxiously scanned the coast with our glasses. Beyond, the land rose in abrupt humps and irregular masses, and appeared to be clothed with a uniform growth of low, but dense underwood, above which the distant cones of snow stood out clear and hard against the sky. It was an impracticable-looking country enough, but we had visited it with the firm intention of going through it, and experience in other lands having taught us how often difficulties disappear upon a closer acquaintance, we did not allow ourselves to feel discouraged. An hour or two later we arrived at the narrow entrance of Avatcha Bay, and shaped our course over a smooth sea for the little harbour of Petropaulovsky.

Avatcha Bay is one of the finest harbours in the world, if not actually the finest. Rio and Sydney have no mean claims for this position of honour, but those of us who had seen both were

133 unanimous in awarding the palm to their Kamschatkan rival. A nearly circular basin of some nine miles in diameter, and with a narrow entrance opening to the S.S.E., it is roomy enough to accommodate the navies of the world. It is entirely free from dangers, has an even depth of ten or twelve fathoms, and owing to its affording excellent holding ground and being well protected from all winds, it is perfectly safe in all weathers. But the ordinary traveller will be struck not so much with its nautical excellencies, as with the superb scenery with which it is surrounded. To the south rises the Vilutchinska volcano, now quiescent, a graceful cone of about 7000 feet; and a little farther eastwards a huge flat-topped mass, exceeding it in height by a thousand feet or more, obtrudes itself as a rare exception to the rule of cone-shaped mountains which seems to obtain throughout the country. It is nameless in the charts, for we are in the land of volcanoes, and it is only 8000 feet in height! On either hand on entering are the two secondary harbours Rakova and Tareinska—the latter nearly five miles in length—and within them again are others on a still smaller scale. Nature here at least has treated the mariner right royally. The iron-bound coast without may be as bad a lee shore as any skipper need wish to see, and the Pacific Ocean may too often belie its name, but here he can rest quietly, and sleep *sur les deux oreilles* until such time as he weighs anchor for the homeward voyage.

But if the southern part of the bay is fine, it is difficult to find words to describe the beauty of its upper portion. We look north, and the scenery on which we have just turned our backs is forgotten, for there, shoulder to shoulder, their vast fields of snow glittering in the sun, stand a trio of volcanoes such as one rarely sees. From the summit of Avatchinska, the centre peak, a delicate streamer of white vapour floats out horizontally, sharply defined against the blue of the clear northern sky. So closely do these mountains seem to hedge in the bay, that it is hard to realise the fact that they are twenty miles distant. But in Kamschatka the

133 scenery is on a large scale, and a reference to the chart explains the matter in five figures.[1]

Mr. Frederick Whymper, in his "Travel and Adventure in the Territory of Alaska," has given an excellent illustration of this group of mountains. Koriatska, to the north and west, stands alone. Avatchinska and Kozelska are somewhat less lofty, the former being close upon nine thousand feet; while the latter is, according to different observers, either 5328 or 9054 feet[2] in height. Such a discrepancy can only be accounted for by the supposition that Avatchinska should be credited with the latter figures. During Mr. Whymper's visit in 1865, Koriatska alone emitted smoke, the others being apparently extinct; but in the month of June, ten years previously, Mr. Tronson found Kozelska in action, sending forth dense volumes of smoke, and covering the surface of the water with ashes.[3] Since then there do not appear to have been any eruptions, and in spite of the white pennant floating at the peak, the grand old mountain looks calm and peaceful enough, guarding the lonely stretches of forest and tûndra at its base.

000 It is only with an effort that one withdraws one's gaze from the exquisite beauty of mountains such as these. What is it that influences us so deeply in the sight of those eternal snows? In what lies that wondrous charm that we experience only in the regions of the north? After many years of travel I think that there is one scene which has, perhaps, remained more vividly stamped upon my memory than any other—a placid river in northern Lapland, down whose stream I floated, drinking in the perfect beauties of the changing autumn. Amid all the mass of scarlet and gold that hung above the mirror-like surface of the water not a single leaf was stirring,—not a sound was to be heard.

[1] The height of Koriatska is 11,554 feet.

[2] Tronson,—"Voyage of the *Barracouta*," p. 109.

[3] From the fact that Mr. Tronson appeared to consider Avatchinska and Koriatska as one and the same mountain, and gave an erroneous height for Kozelska, it seems far more probable that it was the first-named volcano that was really in eruption at the time of his visit.

000 Before us lay the peaks of dazzling snow, and it seemed as though all Nature were hushed and worshipping at that throne of spotless purity.

Rest and purity then—the unattainable, in other words—in these lie the charm. The fairest tropic scene holds no deeper meanings such as these. Beauty of form there doubtless is, a far greater beauty perhaps than that of northern climes, but, after all, it is but soulless. The teeming life of a tropic forest, the marvellous wealth of vegetation, the reckless sacrifice of the weakest, produce upon the mind the same effect as do the streets of a crowded city. No grandeur of "calm decay," no pathos of the changing seasons is here. It is a fierce struggle for existence, fatal to any except the most purely material thought.

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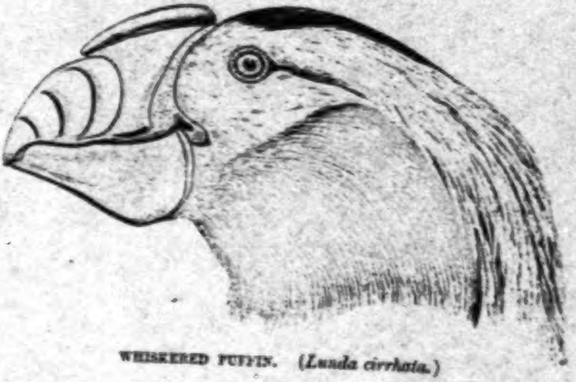
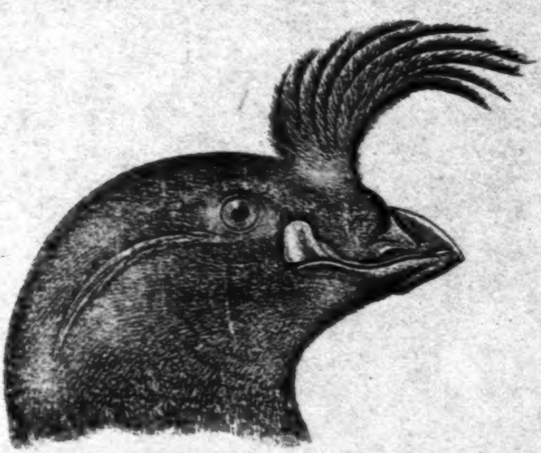


WHISKERED PUFFIN. (*Lunda cirrhata.*)

133 137 The shores of Avatcha Bay extend to the traveller a more smiling welcome than the iron-bound coast outside. Here, the lower hills slope gently down to beaches dotted with driftwood, or, covered with birch and heather, steeply overhang the sea. Behind they are backed by higher ranges clothed with undergrowth, and rising to the height of fifteen hundred feet or more. To the north-west only is this basin-like appearance broken, where the small

133 Paraminka and Avatcha rivers have formed a delta with innumer-
137 able mouths. Low ground also intervenes between the three great volcanoes and the bay, but the height of the mountains annihilates
136 the distance. Hardly a sign of human habitation is to be seen, but the calm surface of the water is broken by quantities of water-fowl, whose nesting-places are the steep rocks at the entrance of the bay. Most noticeable among them are the Whiskered Puffins (*Lunda cirrhata*), and the still quainter-looking Tufted Auks. The little



TUFTED AUK. (*Simorhynchus cristatellus.*)

133 village of Petropaulovsky is invisible, hidden behind a steep promontory forming the western boundary of its harbour. What an admirable harbour it is from a sailor's point of view can best be seen by a glance at the engraving. From the end of this promontory a shoal extends nearly to the other shore, but leaves a channel deep enough for ships of the largest draught. Within this again a sand-spit,—so straight, so narrow, and so regular in form, that it is hard to believe that it does not owe its existence to the hand of man,—runs out from the opposite shore to within a stone's throw
000 of the promontory. We steam in steadily towards the land; to an

000 onlooker it would seem as if we were deliberately beaching the vessel. "Starboard! hard a-starboard!" comes the order. "'Ard a-starboard," echoes the man at the wheel. "Hard a-port!" "'Ard a-port it is," he sings out, clawing the wheel towards him with foot and hand. "Well! I'm blessed if ever I see the likes of this 'ere place," I hear Jack mutter as we are safely berthed, and, on the whole, I am very much inclined to agree with him.

505 Our arrival created no little excitement among the inhabitants of this remote little spot: it might possibly have created even more had we not entered the harbour almost at the moment of departure of the yearly fur steamer for Japan *viâ* Okhotsk. All Petropaulovsky had assembled to wave their adieux, and not a few of them appeared torn by the conflicting desires of seeing the last of their friends and of discovering the business of the new-comers.
161 The steamer was hardly under way before we were receiving our
361 visitors. They were but limited in number. Petropaulovsky, in spite of the imposing letters to which it is treated in the maps, is,
342 after all, little more than a hamlet, and is probably stationary, if not actually decreasing, with regard to population. Clerke, in 1779, found the settlement consisting of thirty huts built upon the sand-spit to which I have already alluded, and consisting mostly of yourts or balagans.[1] Captain Cochrane, who in 1821 performed the unprecedented feat of walking across Siberia from Russia to Kamschatka, describes it as having increased to fifty-seven buildings, some of which were on the mainland; and at the period of the Crimean war it appears to have been as large as it is at the present time, if not actually larger. The town had been transferred to the head of the little harbour, where it now stands, and boasted of no less than two hundred edifices of all kinds. But in Kamschatka, as in other northern countries, winter storehouses, fish-drying sheds, and other out-buildings are so numerous, that the actual dwelling-

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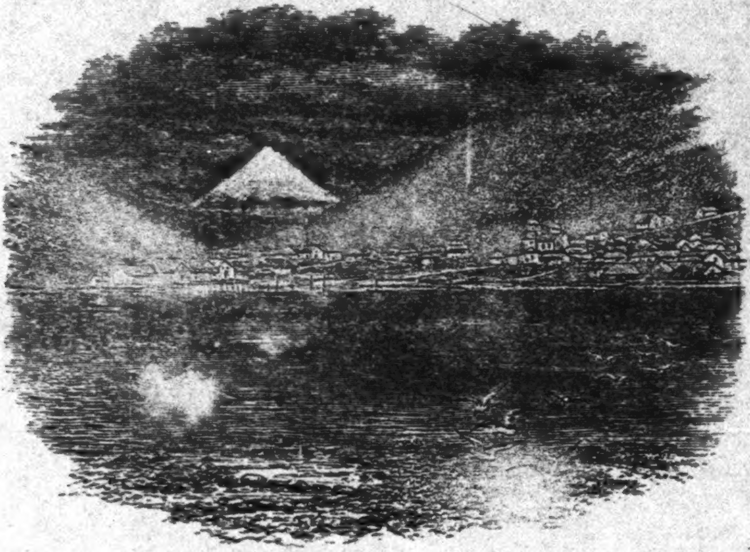
[1] A yourt is a semi-subterranean winter dwelling, roofed with turf. The balagans are only used in summer: they are rough wooden buildings erected on piles. The upper part serves as the dwelling-house, while, beneath, the salmon are hung up in rows to dry.

361 houses may be reckoned at about one-third of that number. Kittlitz,
161 in 1829, found the settlement to number about two hundred inhabitants,
and at the time of our visit we were informed that there
were over three hundred; a number that I should myself be inclined
to think overstated.

133 Standing on the now deserted sand-spit,—the natural break-
361 water of the harbour,—the view of the little town and its surroundings
is strikingly picturesque. To the left is the wooded promontory, the scene of the unfortunate disaster which occurred to the forces of the Allied Fleet in 1854. On the right a hill of some fifteen hundred feet dominates the town, whose log huts are clustered around the shores of the little bay. Here and there a white-painted house of greater pretension strikes the eye, and a stunted grove of trees shelters the church, and the graveyard studded with Russian crosses. Behind the town, artistically filling in the gap



PETROPAULOVSKY HARBOUR.

133 between the hills, rises the snowy cone of Koriatska; and the storehouse
361 of the Alaska Commercial Company, painted the dull Indian
103 red that is so favourite a shade throughout Sweden, forms a
609 pleasing patch of colour in the foreground. It did not take us long
to make acquaintance with Petropaulovsky, in spite of its imposing
name. The inhabitants, we found, called it Petropaulsk, and, in
short, showed every disposition to make things easy for their
visitors. Salmon and bilberries were sent off to us, and, on our
remarking upon the presence of cows, a supply of cream and
441 butter was not long in following. Society here is limited, the
643 Europeans being but eight or ten in number. Mr. Lugobil, the
563 local head of the Alaska Commercial Company, resides here, and
712 superintends the shipping of the sealskins from Bering and Copper
R Islands; as does Captain Hunter, the cheery agent of Phillippeus
and Company, another firm of fur-traders. Of stores (the American
177 term is in use here) there are but two. One of them was owned
.64 by a kindly old Swede, who also acted in the capacity of Mayor.
He had not visited his native land for thirty years, and it was
evidently a source of the keenest pleasure to him to talk of it to
one of us who knew it, and loved it almost as much as he did himself.
The town is now no longer a military post, and the barracks
and fortifications, razed to the ground by the English in 1855, have
never been rebuilt. The entire authority is vested in the Ispravnik,
whom, in spite of the exigencies of his profession, we did not find
averse to the seductions of trade. A Russo-American Jew, better
known as the King of Kamschatka, of whom the Russian Government
was extremely anxious to get rid, completed, with Dr.
Dybowski, the list of Europeans of the sterner sex. The ladies
were only four in number.

757 With Dr. Dybowski, who has acquired a European fame as a
115 naturalist, it was a pleasure to make acquaintance. His life had
R been an eventful one. Imprisoned in Siberia for some time for taking
177 part in the Polish insurrection, he had eventually been pardoned
.75 and made government doctor of Kamschatka, in which capacity he

7

115 757 R 177 .75 had visited the greater part of the peninsula. Owing to the difficulties of communication excepting in the winter season, he had abundant time on his hands, which he had devoted with indefatigable ardour to his favourite pursuits. Geology, surveying, palæontology, photography and ornithology,—each and all had occupied his leisure hours, with results which were evidenced by the richness of his collections. None of the other Europeans knew anything of the country outside Petropaulovsky, and to him alone we were indebted for what information we could get about our projected route, as well as for many useful hints on Kamschatkan travel.

122 484 Our intention was, if the plan were feasible, to travel northwards from Avatcha Bay until we struck the head waters of the Great Kamschatka River, where we were to procure canoes if possible, or if not to construct rafts, and by this means float down the stream to the sea. Meanwhile, the yacht was to remain in Petropaulovsky harbour for a month or six weeks, and then proceed to the mouth of the river to await our arrival. We found that Dr. Dybowski, in spite of his extensive travels in the peninsula, had not himself performed this journey, neither was he aware of any other person who had attempted it. Communication often takes place with Nischni Kamschatka—an *ostrog* near the mouth of the river—in the winter, but the sledges do not, as in Lapland, travel on the river; and though occasionally a few of the lonely settlements upon its banks are passed, the track leads for the most part by short cuts overland, and we had no means of judging the
262 164 distances or the length of time necessary for our journey. From Dr. Dybowski, however, we were able to obtain all the information that was to be got upon the subject; and to learn that, whatever other difficulties we might have to encounter, that of an insufficient supply of food was certainly not one. His accounts of the really marvellous abundance of fish, which at the time seemed almost incredible, we were destined later to find, if anything, understated. Whether the almost exclusive fish diet of the inhabitants of the

262 country has any connection or not with the leprosy prevalent
164 among them, it is difficult to say. Our informant described it as
137 being a common disease, and he must have had considerable
241 opportunities of judging, but it is remarkable that during our
journey through the country we met with but one solitary case.
Scurvy was, we were told, uncommon, owing no doubt to the
abundance of the wild garlic and the *sarana*—a liliaceous plant
whose bulb is stored for the winter, and supplies the place of the
potato. This latter vegetable has, however, become much more
extensively cultivated of late years.

115 It was a matter of great regret to us that our acquaintance
758 with Dr. Dybowski should of necessity have been so limited. He
R was on the eve of a long journey in search of fossils to the Kuril
177 Lake, which lies in an almost unknown region at the southern
.75 extremity of the peninsula. It was by such pursuits alone that
he was able to mitigate the loneliness of what was, in reality,
an exile. During the winter he travelled over the country to
such isolated spots of it as are inhabited, and saw his patients.
These he was supposed to supply with such medicine as would
suffice for their cure, or last them, should they be incurables,
until the time of his visit in the following year! It is not every
parish doctor whose district is spread over the extent of one
hundred thousand square miles!

During the week that was necessary for the completion of our preparations we had abundant time for the exploration of Petropaulovsky and its surroundings. The numerous harbours and lovely scenery of Avatcha Bay would take a month to become thoroughly acquainted with, and it would be hard to imagine a more charming place for the naturalist and sportsman. Possibly, when the salmon rivers of Norway have reached a prohibitory price, and the game of India and South Africa has disappeared, some adventurous individual will recommend Kamschatka as a new field for sportsmen. At present, it must be confessed, it is not very easy to get there. Every year the port is visited by a

439 505 Every year the port is visited by a Russian cruiser, and, if her officers should chance to be as excellent companions as I have on every occasion found those with whom I have been brought into contact, a traveller might possibly get the offer of a passage, which, if he has command of the French language, a strong head, and an unlimited capacity for sweet champagne, should be enjoyable enough. A steamer, or steamers, belonging to the Alaska Commercial Company make two voyages annually to the port, to ship the furs awaiting them there and at Bering Island. They start from Yokohama, and it would no doubt be possible to obtain a passage. On leaving Kamschatka for the second time, however, these ships do not return south, but proceed direct to San Francisco.

136 226 241 The weather upon our arrival was pleasant and invigorating to a degree; the days absolutely hot, with a brilliant sun and wonderfully clear atmosphere, and the nights cold, but bright. But for the mosquitoes nothing could have been more enjoyable. These pests, which render life in a northern climate almost unbearable during the summer, were not very numerous in Petropaulovsky itself, but in some parts of Avatcha Bay we found them abundant, while in others not one was to be seen. As every one knows, the presence of these insects is almost always dependent on the existence of marsh, low-lying ground, or clumps of birches and other trees in the neighbourhood; but here, oddly enough, we found no such reasons to account for their erratic distribution. The little gardens of the settlement were aglow with bright flowers, though choked with weeds and coarse grass. But little cultivation was to be seen; a few patches of potatoes, cabbages, and such like garden produce, surround the cottages here and there, but there are no cereals. Rye ripens in some parts of the valley of the Kamschatka River, and would probably do so here, according to Dr. Dybowski, but its growth is not attempted. To the Kamschatkan the harvest of the river and the sea is an affair of such supreme importance, and demands so much of his time, that he has but little leisure for agriculture even if he had the inclination.

211 There are no roads even in the little settlement itself, and,
361 from the irregular distribution of the houses, and the equally
363 irregular ground on which they are built, the traveller has to
493 pick his way from one to another as best he can. It is needless to state that wheeled vehicles are, in consequence, unknown. The church, an uninteresting-looking building, painted white, is practically the only public edifice.[1] Near it, and at the bottom of Mr. Lugobil's garden, stands the little monument erected to the memory of Bering. It is an iron column of no great size or taste, which was sent hither years ago from St. Petersburg, and, half buried in the lush grass which at this season of the year grows so freely in Kamschatka, it looked melancholy enough. It is a cenotaph, for the bones of the celebrated navigator rest far away upon the island that bears his name. A monument to Captain Clerke, the successor of Captain Cook, is, I believe not far from it, but we did not see it. The town is, indeed, somewhat rich in these objects of melancholy interest, for in a gap in the western promontory, once the site of an old battery, the dilapidated remains of a memorial column to De la Perouse is still to be seen; while on the sand-spit at the entrance of the harbour, an erection less pleasing to the eye of an Englishman is conspicuous, commemorating the success of the Russians against the forces of the Allied Fleet in 1854.

I must confess that, previous to our visit to Kamschatka, I had been in entire ignorance of the affair that resulted in such disaster to our forces. But little known or commented on at the time, it has probably long ago passed out of the memory of most of those of the past generation; while, owing to the success with which the matter was hushed up, it had but little chance of becoming known
175 to the present. In the action of the 24th August, 1854, we suffered a defeat as humiliating as it was ridiculous, and one for which, from the circumstance of our attack having been made on a

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[1] At the time of Lessep's visit, in 1787, there was no church in the settlement, but he alludes to the former existence of one, and mentions that its situation was known "by means of a sort of tomb which formed a part of it."

[Petropavlovsk--Analyst]

175 town so insignificant, we could hope to gain no sympathy at the hands of other nations. The whole story was related to us by Captain Hunter, who was himself an eye-witness of the occurrence, but the details have been so clearly and concisely given by Mr. Whymper in his "Travel and Adventure in the Territory of Alaska," that I make no apology for quoting his account.

"In the autumn of 1854 (28th August[1]) six vessels of war—French and English, comprising the *President*, *Virago*, *Pique*, *La Forte*, *L'Eurydice*, and *Obligado*—arrived off Avatcha Bay: a gun, placed near the lighthouse at the entrance, was fired by the Russians, and gave the inhabitants of Petropaulovsky notice to be on the alert. Admiral Price immediately reconnoitred the harbour and town, and placed the *Virago* in position at a range of two thousand yards.

"The Russians were by no means unprepared. Two of their vessels, the *Aurora* and *Dwina*, defended the harbour, and a chain crossing the narrow entrance shut it in. There were seven batteries and earthworks, mounting about fifty guns of fair calibre.

"The *Virago* commenced the action with a well-directed fire, and several of the batteries were either temporarily or entirely disabled. The one farthest from the town on the western side was taken by a body of marines landed for the purpose. The guns were spiked. There were three batteries outside and on the spit, two at the termination of the promontory on the western side of the harbour, and one in a gorge of the same which opens on Avatcha Bay. It is in this little valley that the monument to La Perouse stands.

"The town was well defended both by nature and art. The hills shut it in so completely that it was apparently only vulnerable at the rear. There a small valley opened out into a flat strip of land immediately bordering the bay, and, although there was a battery on it, it seemed an excellent spot to land troops.

"Our vessels having taken up a new position, and silenced the batteries commanding it, seven hundred marines and sailors were put ashore. Half of them were English, half French; a large number of officers accompanied them, while they had for guides two Americans, said to know the ground. They appear to have expected a very easy victory, and hurried in a detached and straggling style in the direction of the town, instead of proceeding in compact form, in military order. A number of bushes and

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[1] This date does not agree with that on the monument, where it is given as the 20th-24th August.

175 small trees existed, and still exist, on the hill-sides surrounding this spot; and behind them were posted Cossack sharpshooters, who fired into our men, and either from skill or accident, picked off nearly every officer. The men, not seeing their enemy, and having lost their leaders, became panic-struck, and fell back in disorder. A retreat was sounded, but the men struggling in the bushes and underbrush (and in truth, most of them, being sailors, were out of their element on land), became much scattered, and it was generally believed that many were killed by the random shots of their companions. A number fled up a hill at the rear of the town. Their foes pursued and pressed upon them, and many were killed by falling over the steep cliff in which the hill terminates.

"The inhabitants—astonished at their own prowess, and knowing that they could not hold the town against a more vigorous attack—were preparing to vacate it, when the fleet weighed anchor and set sail, and no more was seen of them that year."

The actual number that fell in this engagement is uncertain. In the "Nautical Magazine" for October, 1855, it is stated that we lost 107 killed and wounded, but we were told that the total number of French and English who fell was 170 men. Under the hill at the back of the town still stands a rude enclosure, whose dilapidated white palings surround three crosses, beneath which Russians, French, and English lie side by side. Others were buried where they fell. The bodies of some of the officers were borne from the field by the Allied Forces, and interred at the entrance of the Tareinska Harbour on the opposite side of Avatcha Bay. They lie on a small promontory on the land side, opposite a little island. We had hoped to visit the spot, but the limited time we had at our disposal, and the preparations necessary for our expedition through the interior, prevented us. We were told that, in the spring of the preceding year, a party, of which our informant formed one, had searched in vain for the graves, in spite of that of the English admiral having been marked by a cross. The death of this officer is by the inhabitants of Petropaulovsky attributed indirectly to the result of the engagement. As a matter of fact, it occurred, I believe, upon the preceding day; the troops during the affair being under the command of the French admiral.

175 In the opinion of those who had been in Petropaulovsky at the time, the disaster was chiefly due to the division of the forces on landing,—one body getting ahead of, and being fired into by the other. The thickness of the bush prevented a recognition of this error, and the attacking party imagined themselves taken in rear. The Cossacks took advantage of the mistake, and before long the Allies were in a state of confusion which the nature of the ground rendered hopeless. More met their death by being driven over the precipice, it was said, than actually fell before the rifles of the Cossacks.

The victors were left in peace for the time being, but, in the spring of the following year, the Allied Squadron once more made its appearance. The *President*, *Pique*, *Dido*, *Brisk*, *Encounter*, and *Barracouta*, together with the French frigate *Alceste*, assembled off Kamschatka, and entered Avatcha Bay on the 31st May, 1855. They found the town completely deserted by the Russians. Three foreign residents alone remained, and from them they learned that the settlement had been evacuated by order of the Emperor upon the breaking up of the ice. Even the natives had fled. On the 7th June the batteries and magazines, which had been strengthened and increased in number since the engagement in the preceding year, were blown up, and two days later all the Government buildings were burnt to the ground. The latter proceeding was, in all probability, the wanton act of some English blue-jackets, and was done without the knowledge of our authorities. It was an unfortunate occurrence, the explanation of which could hardly be expected to be believed by the Russians, and the affair still rankles in the breast of the inhabitants of the little settlement.

A few days later the Squadron left, and the inhabitants returned to their homes. Poor little Petropaulovsky has to rest content on her honours of 1854, for the town has never been refortified, and is now no longer a military post.

231 One cannot be long in Kamschatka without making the
492 acquaintance of that very necessary animal, the sledge-dog. When

231 492 the fact is taken into consideration, that for every inhabitant of the
peninsula there are at least five or six of these animals, it will be
understood that the effect produced is hardly inferior to that
exhibited by the streets of Constantinople. "A dog's life" is a
phrase which is here most appropriately realised. No comfortable
homes are provided for them to enable them to withstand the
rigours of the arctic climate, and the poor beast, except when
actually at work, has in most cases to "find himself." Long
experience, and the instinct transmitted to him by his ancestors,
has, however, given him all the resources of an old campaigner.
Stumbling at night about the uncertain paths of the settlements,
the traveller is not unfrequently precipitated into the huge rabbit-burrows
which the animal constructs to avoid the cutting winds.
His coat, nearly as thick as that of a bear, is composed of fur rather
than hair. As for his manners, they are, like those of the midshipman's
savage, almost non-existent. He has thoroughly grasped
the fact that self-preservation is the first law of Nature, and does
not scruple to act upon it, in its widest meaning, upon every
occasion. Wonderfully well-trained, cunning, and enduring, he is
at the same time often obstinate and unmanageable to a degree,
and is apparently indifferent to the kicks and blows so liberally
showered upon him by his master. Excepting in settlements
where neighbouring stretches of *túndra* render the use of sledges
possible in summer, he has a long holiday during that season.
During this time he wanders over the country at will, sometimes
returning at night to his burrow, at others being absent for days
together. A good hunter and fisherman, he supports himself upon
the game and salmon he catches, and it is but rarely that he deserts
his master for good. But the inhabitants have to pay a good price for
231 his services. Owing to his rapacity, it is impossible to keep sheep,
136 goats, or any of the smaller domestic animals, and Kamschatka is
one of the few countries in the world in which fowls are unknown.[1]

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[1] In Petropaulovsky this loss is partially made up for by large quantities of sea-birds' eggs brought from Okhotsk, and the islands at the mouth of Avatcha Bay.

231 *Rien n'est sacré pour un sapeur.* Raw hides, boots, and even babies,
136 it is said, occasionally vary his diet!

To our ship's crew Petropaulovsky appeared little less than a
paradise. The bright sunny weather and clear cold nights were a
pleasant change after the heat of the tropics, and the forecastle
mess was furnished with many unaccustomed delicacies. The
136 harbour and rivers teemed with fish; periwinkles *à discretion* were
137 to be had for the picking, and milk and bilberries were abundant.
The whiting and herrings were, however, left in comparative peace,
owing to the ease with which salmon were to be obtained at the
mouths of the Avatcha and Paraminka rivers. On one occasion
no less than three hundred of these fish were obtained at one haul
of the seine, and the crew occupied themselves in salting, smoking,
000 and otherwise preserving the spoil. Jack was in his element, and
doubtless would not have objected to passing the rest of his life in
such a fascinating spot. Our shooting excursions to various parts
of the bay were much enjoyed by the boats' crews, and the forward
part of the ship began ere long to be ornamented with bearskins
that the men had obtained by purchase or barter from the natives.
Meanwhile we had been making arrangements with the Ispravnik,
and the individual I have before mentioned under the title of the
King of Kamschatka, for the ponies that were necessary for the
first part of our journey; but, as there was some delay in getting
133 together the requisite number, a party of us started to visit the hot
springs of Kluchi,[1] which lie some few miles from the shore on the
other side of the bay. Excepting during strong south-easterly
winds, which send a somewhat heavy swell into the entrance, the
passage across is generally pleasant enough even in small boats.
Though blocked with ice in the winter, the bay is, we understood,
but rarely frozen right across, although the harbour of Petropaulovsky
is, of course, closed for some months. Landing in a bay
north-west of the entrance to Tareinska Harbour, we passed through
an extensive birch-forest, and emerged at length on the shores of a

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[1] Kluchi, I believe, is the Russian word for springs.

133 picturesque lake, across which we were conveyed in dug-out canoes
515 to a small village on the opposite shore. From here the road lies
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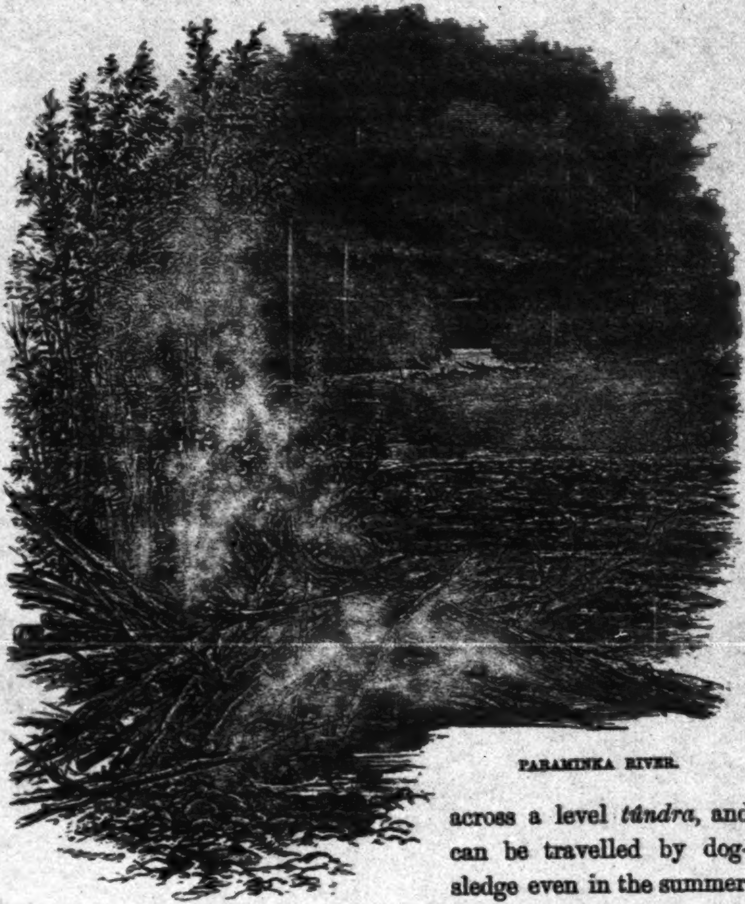
across a level *tûndra*, and can be travelled by dog-sledge even in the summer. Kluchi itself is a small village composed of a few log-built huts and balagans, but, with its background of the Vilutchinska volcano, is prettily situated. It stands in an open valley, in which some attempts at cultivation are made. The hot springs—the steam from which is visible at some



PARAMINKA RIVER.

133 distance—have a temperature of about 108° Fahr., and appear to be
515 nearly devoid of sulphur. They are much resorted to by the natives
757 for cutaneous and other disorders, and have huts built over them for
bathing purposes, thanks to the orders of the Ispravnik. Near the village runs a branch of the Avatcha River, down which our party paddled to the sea; and on arriving at the yacht we were pleased to learn that most of the horses had been brought into the settlement, and that there was every prospect of our starting on our long-planned expedition through the interior in the course of a couple of days.

CHAPTER V.

000 KAMSCHATKA—(*continued*).

We begin our journey—Stampede of the packhorses—The effects of vodki—Stari-ostrog—Salmon à *discretion*—Large birches—More stampedes—The fur-trade—Prices of skins—On the *túndras*—Narchiki—Enormous abundance of salmon—Mortality among the fish—A Kamschatkan interior—*Ovis nivicola*—Hot springs—Uses of the birch-tree—Kamschatkan ponies—Gunal—Balagans—Sledge-dogs—An Indian summer.

122 EARLY on the morning of August 19th we rowed ashore with a somewhat formidable amount of baggage, and found the horses awaiting us. Of these there were sixteen; and four little foals, engaged in capering round their mothers, were, we learnt, also to join the expedition. This number, owing to our numerous *personnel*, was hardly sufficient, but as we had requisitioned almost all the available cattle in the neighbourhood of Petropaulovsky, we decided to make a start with them, trusting to be able to pick up others at the little village of Avatcha, about twelve versts distant.[1] Our party were ten in number, our three selves with two servants forming the yacht contingent. These latter were old campaigners. Louis, who had served in the Franco-Prussian War, and had been in the army before Paris in the terrible winter of 1870-71, had done much travelling in his master's service and elsewhere, and was without exception the very best servant I ever saw. Spiridione Zembi, a Maltese Greek, our cook, deserves no less praise. Master alike of his profession and of many languages, he contrived to

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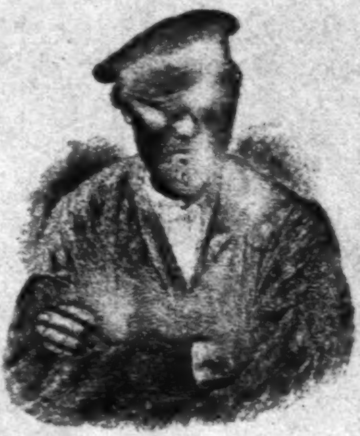
[1] A verst is two-thirds of an English mile.

122 produce dinners under the most trying circumstances which would not have disgraced the table of an alderman. European servants are, in rough travel, by no means always an unmixed good, and it is pleasant therefore to have to record an instance to the contrary. Nor were we much less fortunate in our two guides. Both were old sable-hunters and good backwoodsmen. Jacof Ivanovitch was a solemn, but good-humoured Siberian Russian, who knew the country well; and Afanasi Waren, in whom there was more than a suspicion of English blood, spoke our language very fairly. The latter was a jovial soul with a merry eye, and if report ran true, a great lady-killer. Under the sobriquet of "Half-nasty" he afterwards became an equally great favourite with our crew. Our complement was made up with three half-breed natives, in charge of the packhorses, in whose favour there is but little to say. Of the misdeeds of one of them, whom, from his partiality for the liquor of the country, we afterwards nicknamed Vodki, I shall have more to say in the sequel. Lazy, untruthful, and apt brutally to ill-treat their horses whenever we were not at hand to interfere, they caused the only trouble we had during the first part of our journey. The inhabitants of the river settlements that we were destined to meet with later were, however, as will be seen, far worse; and in comparison with them, our horseboys came afterwards to be regarded in a far more favourable light than they really deserved.



AFANASI WAREN.

492 The pack-saddles used throughout the country are of an excellent pattern, and owing to the hooks with which they are provided, the necessity for the many lashings which are so in-

492 convenient in this kind of travelling is avoided. A thick layer of bearskin was placed over the saddle-cloth, and effectually prevented sore backs. Our personal gear, enclosed in bags made from the skin of the hair-seal, was easily adjusted, but the photographic apparatus and other breakable objects required more care and time,
133 and it was noon before we were fairly off. We bade adieu to our
487 friends, and passed out through the narrow gap at the back of the village towards a small lake of brackish water which hems it in to the north. Here at one time stood the hospital mentioned in Captain Cook's "Voyages," but no trace of the building now remains. Circumventing the lake, we struck off to the north-west and, before long, the track, which had never been very well marked, became obliterated. Our path led through a rough but picturesque country, dotted here and there with stunted birches, and we steered across it for a certain point in the landscape recognised by our guides. By our side trotted one of the most ornamental members of the expedition, whom I have hitherto neglected to introduce—Verglaski, a magnificent bear-dog belonging to Jacof, of an aspect almost as solemn as his master. Our horses had hitherto gone fairly well, but during a short halt that we made to adjust some of the packs a stampede occurred, and in an instant the scene was changed to one of the wildest confusion. Kicking, plunging, colliding against trees, and dashing wildly in all directions, it was not long before the horses succeeded in disembarrassing themselves of their loads, and the ground presented the appearance of having been recently passed by a beaten army in full retreat. The horseboys, more than half drunk, pursued the fugitives, cursing volubly in Russian and Kamschatdale; while we, to whom these little unpleasantnesses of packhorse travel had not even the merit of novelty, lit our pipes resignedly and proceeded to gather up the fragments. It was a full hour ere we were again *en route*. These incidents, "tedious as a twice-told tale," and trying alike to the temper and the baggage, recurred again and again. We progressed, as it were, by a series of stampedes, and our horseboys became almost as erratic in their locomotion as their charges.

[of Petropavlovsk--Analyst]

137 locomotion as their charges. At this rate of advance our journey's
133 end seemed distant indeed. We pressed on, however, as well as we could, and crossed a small plain from which the base of the Avatchinska group of volcanoes was visible to our right. Their summits were hidden in thick mist, and the weather, which had hitherto been fine, now looked most threatening. Arriving at a small stream, Vodki and his two companions halted, and declaring that there was no water farther on, proceeded to unload the horses. This we soon put a stop to, and telling them that, water or no water, we had no intention whatever of camping for another hour or more, we resumed our journey. The scenery now changed, and we entered a gloomy birch-forest with much thick undergrowth. This was in places six or eight feet, or more, in height, and was composed of coarse grass and giant umbelliferæ, with an occasional blue monkshood, varied in the more open parts with large patches of yellowing bracken. Before long we reached another stream, and were thus enabled to prove the truth of our surmises; but it was not till some time later that we finally halted for the night, the horseboys being by this time scarcely in a condition to proceed farther. We were glad to pitch camp and get a rest, as it had already begun to rain. Before turning in we succeeded in finding Vodki's brandy bottle, but it was perfectly empty. The man had disposed of a pint or more of raw spirit since leaving the settlement!

712 In this kind of travel movement is not very rapid for the first
R day or two until every one has shaken down to his work, and on
177 the following morning we were nearly three hours in getting break-
. 71 fast and striking camp. The horseboys were depressed and inclined to be penitent. If, like an old Kafir servant of mine, they estimated the amount of enjoyment of the previous night by the strength of the morning's headache, they ought, to all appearances, to have been well pleased. We had decided to leave Avatcha on our left, and to make for Stari-ostrog,[1] a small village a little higher up the Avatcha River, and forty versts from Petropavlovska.

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[1] The *ostrogs*, or small forts, were erected by the Russians in bygone days as a protection against the natives at the time of the first settlement of the country. The name now alone remains, all traces of fortification having long since disappeared.

136 Avatcha River, and forty versts from Petropaulovsky. We passed
137 through the same monotonous forests of birch as before, which, like
487 those of other northern countries, seemed singularly devoid of
animal life. An occasional coal tit, which from its note and habits
appeared identical with the tame little freebooter of our own
gardens, or the tapping of a woodpecker,[1] alone broke the almost
death-like stillness which reigned around. We had struck a
well-marked trail, and progressed in Indian file, the packhorses (tied in
fours, each to the tail of the one in front) leading the way, and
relieving the monotony by an occasional breakdown or a stampede.
231 Almost all these ponies are strong and well shaped, but from
the ill-treatment they receive at the hands of their masters, have
learned to bite, kick, and shy on all occasions, together with other
accomplishments of like nature which were somewhat apt to
000 disturb our equilibrium. There was but one saddle among us, and
the "Kamschatkan Peats," as we named the combination of pillow
and pack-saddle which we used as a substitute, though comfortable
enough when we ambled along quietly, were apt to become slightly
insecure when, as a naval member of our party expressed it, we
"made bad weather."

The path between Stari-ostrog and Petropaulovsky appears to be tolerably well-travelled, to judge from the frequency with which we came across the marks of old camping-grounds, but we met with no one on our way. It was afternoon when we reached the river, and crossing a small affluent, found ourselves opposite the village. We had ridden on ahead, and were hailing the natives for canoes in which to cross, when a tremendous clattering in our rear caused us to turn, and we beheld the cook's horse advancing in full stampede, but minus his rider. Beneath his belly a large canteen swung violently from side to side, half-open, and discharging a shower of tin cups, knives, forks, plates, tea and coffee kettles, and other articles of like nature in all directions. We retraced our steps sadly, picking up such articles as we could find, but

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[1] *Picus tridactylus*, considered as a distinct species (*P. albidior*) by Dr. Stejneger.

000 among them was no trace of Cook. Presently we came upon that imperturbable gentleman, placidly smoking a cigarette. He explained the matter in a few words:—"Very sorry, sir, but" (indicating the horse) "I've never been shipmates along o' one of them things before!"

133 We crossed the river in two dug-out canoes lashed together.
136 These boats are as a rule small, and without attempt at elegance
501 in shape, such as one sees in Borneo and other parts of the Malay
Archipelago. Where the rivers are shallow, long poles are used to
propel them, and indeed the natives always seem to prefer this
implement to the paddle, wherever its use is possible. The Avatcha
River is here about eighty yards in breadth; shallow for the most
226 part, but with a centre channel about seven feet deep. It appeared
251 to be teeming with salmon. Stari-ostrog, situated on the right
bank, consists of ten huts and a large number of fish-drying sheds.
262 The long Kamschatkan winters, during which it is difficult to
361 procure food of any kind, and the consequent necessity of fish as an article of diet for almost every living creature in the settlements—the cows and horses even not excepted—create a need for a very large number of these buildings; and the consequence is that, to the eye of the new-comer, the villages appear very greatly larger than they really are. Scanty as the population of this wild country is, the amount of salmon annually consumed is absolutely enormous. At this little village, for instance, we were told that, during the season, 20,000 fish would be no uncommon catch for a single day! Here, however, owing to there being no other settlements higher up the river, they are permitted to stake the stream right across from bank to bank, and the number of fish thus obtained may probably be in excess of that in other places. The labour expended in gathering so abundant a harvest is, of course, very considerable, and during the season the inhabitants work day and night to get in a sufficient supply for the winter.

563 We were greeted by the headman and brought to his house, where we were regaled with milk, sour cream, coarse rye bread,

[Avacha--Analyst]

563 and sour bilberries. The houses of the better class of natives are almost all log-built. They are unpainted, and the rooms, unlike those usually seen in the northern parts of Scandinavia, are generally small. Of these there are usually two—rarely or never more than four; and in most of the huts in the larger villages the floors are boarded. As is the case among other northern nations, the houses are in many places raised above the ground, either by means of a foundation of stone, or, like a haystack, by low wooden pillars at the corners. The hut is warmed by a huge brick or stone stove, generally built between the two rooms. It is supplied with fuel only once daily, and the heat thrown out is so great, and the atmosphere, owing to the hermetically-closed windows, so stuffy, as to be well-nigh insupportable to a European. The furniture is simple. A few chairs, an abundance of cockroaches and other less mentionable insects, a rough deal table, and a tawdry gilt *eikon* of the Russian Church—a sort of fetich without which no peasant would feel comfortable—is usually a tolerably full inventory. A house of this kind is, of course, only owned by what may be termed the upper classes—those of Russian blood who have migrated from Siberia. The dwellings of the half-breed Kamschatdales, which I shall presently have occasion to describe, are very different.

000 While we were superintending the passage of our horses across the river—a somewhat lengthy operation, owing to the depth of the stream necessitating the off-loading of the baggage—we were astonished at being greeted in very fair English by a long, lean, cornstalk of a lad, who expressed his pleasure at meeting travellers of that nationality in his own country. He was evidently possessed of no little love of travel himself, and told us that he had been for a year as cabin-boy on board an English steamer trading between China and Japan. His advent was opportune, as through him we were able to make arrangements for three more horses, which we were to pick up on the road the following day. For these, which were to accompany us until we reached the head waters of the Kamschatka River, a distance of about three hundred versts, we

000 were to pay seven roubles each. The Ispravnik and the King had not done badly; their charge had been exactly quadruple!

226 In company with our English-speaking friend we went to in-
251 spect the fish. These were drying in open sheds, much as tobacco is dried in the Southern States of America. Split in half as far as the tail, cleaned, washed, and deprived of its head, the salmon is hung across a stick in company with fifty or sixty others. These sticks are then placed a few inches apart, with their ends resting upon other poles which run from end to end of the shed. The fish are thus freely exposed to the air, but protected from the sun. They are not hung lower than about eight feet from the ground, on account of the dogs, who are occasionally seen gazing at them with longing eyes and watering mouths, experiencing the tortures of Tantalus. Excepting for a sledge-dog, however, the sight is not a tempting one. Swarming with countless millions of maggots, which distil in a gentle but unceasing rain upon the ground beneath, whitening it as with a shower of powdery snow, the fish seem to be so rapidly disappearing that one wonders how any remain till winter. Another sense beside that of sight causes the same reflection, but neither the dogs nor their masters are particular as to these little matters. The latter, indeed, prefer their fish in an advanced stage of decomposition, and have the same method of preparing it as I have seen in some parts of Lapland. The salmon are buried for three or four months in pits, and any difficulty in extracting them at the end of that time is overcome by means of a ladle!

133 It was late in the afternoon before we were again *en route*, our
137 course lying north-west through the valley of the river. This bears in many places distinct evidence of the latter having been, at some period, of very much larger size. We then ascended the bluff of the old left bank, and rode through an interminable forest of birch-trees, which were here larger than I have ever seen them elsewhere. Many of them must have been at least a hundred feet in height.

000 We began the next day with a more than usually exasperating

[Avacha--Analyst]

22: Guillemard T-2 (1882) 1886 Kamchadal

000 stampede. These occurrences, though common enough during
the earlier part of our journey, became less and less frequent as we
advanced, and before we reached our destination had altogether
ceased to trouble us. We did not regret it, for no amount of repetition
accustomed us to them, and it needed an almost superhuman
patience to take them philosophically. We were now
passing along a fairly well-marked trail, and, a short time after we
were once more in marching order, we met four miserably ragged
and dirty natives who seemed to be moving house. They were
mounted, and drove before them a couple of cows. We inquired if
they had any furs for sale or barter, but they were unable to understand
us, and thinking we wanted milk, produced a few drops of
that liquid tied up in a small piece of the intestines of a recently-killed
bear. This delicacy, however, we declined with thanks. A
little later we came upon the new addition to our cavalcade for
which we had arranged at Starigostrog—three ponies, each of which
was accompanied by her foal. We formed now a party of some
size, composed of eleven men and twenty-six horses, and the playful
gambols of the little foals, though somewhat provocative of stampedes,
served to counteract the gloom of the monotonous birch-forests
137 through which we passed. The height of the undergrowth
of grass and other coarse herbage was enormous: such, indeed, as I
could not have conceived possible for annuals to attain in these
northern climes. In many places it was two or three feet above
our heads as we rode. There was but little game to be looked for,
or at least to be easily obtained, among such rank vegetation, and
we pressed on without delay, as our rate of progress since leaving
Petropaulovsky had been anything but satisfactory.

000 Our new horseboy, though in other ways a great improvement
on his fellows, was unluckily a somewhat sleepy individual, and
signalised himself during the course of the afternoon by causing
the most disastrous stampede we had yet experienced. The pack-horses,
as I have already mentioned, were lashed together in strings
of four, the leading animal carrying a horseboy in addition to his

000 load. The last string was in charge of our new man, who, overcome by the "damnable iteration" of a birch-forest, fell asleep and tumbled off his horse. In his fall, unfortunately, he dislodged some of the loose packs, which, swinging under the horse's belly, started it off at full speed. Dashing wildly forward the frightened animals caught the others in rear, upsetting Vodki and communicating the stampede to the whole line. We were at the time in thick forest, and plunging into this, our cavalcade rapidly disappeared in all directions, various ominous crackings alone revealing their line of progress. When separate individuals of a string try to pass on different sides of the same tree a startling effect is very often produced, but the old and experienced packhorse knows that better results may be obtained by the navigation of a three-foot passage between two birches. We found Ivan supporting his head in both hands, and proceeded to administer a lecture and surgical relief. Vodki, by the really masterly and exhaustive manner in which he was exhibiting the expletive richness of the Russian language, was evidently not in a condition to require attention. There is always, happily, a comical side to these affairs, which makes the traveller regard "the most disastrous chances" to his baggage with tolerable equanimity.

712 We pitched camp about twelve or fifteen miles from Narchiki,
R a little village that in bygone days was one of the palisaded *ostrogs*
177 of the Russians; and though close to a pretty and most likely-
. 71 looking stream, we were unable to catch any fish for supper, for
the first and only time during our ride to the river.

224 In most bush countries it is the hunter's rule to see that the fire
438 is extinguished, or at least rendered harmless, before breaking camp.
443 In Kamschatka the greatest care is taken about this, as bush-fires
452 invariably cause the sables to desert the neighbourhood for many
563 miles around. As my readers are perhaps aware, the fur of this animal is the most valuable export of the country, and a very large proportion of the inhabitants are employed for the greater part of the year in sable-hunting only. The price obtained by the hunter

224 for the skins varies very much if these be sold separately. But
438 generally the season's catch is disposed of *en masse*, and a fixed
443 price paid per head, whether good, bad, or indifferent. By far the
452 greater part of the trade lies in the hands of the individual I have
563 alluded to under his title of the King of Kamschatka. That he
was by no means beloved of his subjects was abundantly evident, but his power was so great that but few were able, even if they dared, to shake off the hold he had upon them. As the owner of what was, practically, the only store in Petropaulovsky, the natives became easily indebted to him, their account for goods supplied being invariably in excess of the amount allowed for the furs brought for disposal. They are thus, we were informed, obliged to bring the catch of the following season to the same market, where, owing to the absence of competition, the prices are by no means high. If the corresponding profit upon the flour, cloth, and other goods sold be taken into consideration, it will be seen that, with a little capital and an elastic conscience, a fur-trader in Kamschatka ought not to do badly.

435 In St. Petersburg the price of a single sable-skin ranges from
563 £2 to £25. In Kamschatka the wretched peasant, living upon
half-rotten fish and exposed to the rigours of a climate which, in its severity, surpasses that of almost every inhabited region of the world, receives, nominally, an average of sixteen roubles[1] per skin. In reality, as I have stated, he has to take out this value in
273 goods. He is wise if he does so, and can keep clear of the brandy,
435 which, in spite of the law which forbids its sale anywhere but
R in Petropaulovsky, has proved the ruin of so many of his country-
177 men.

.27 The price of other skins is generally settled individually. A
fairly good bear's skin fetches about three or four roubles. It is only the very finest and largest that will bring as much as seven roubles. A river otter, if in good condition, is valued at the latter

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[1] The Russian paper rouble is worth nearly half-a-crown; the silver rouble about three shillings and sixpence.

[see page 74--analyst]

435 price, but this animal does not exist in any numbers in the peninsula. The most valuable skin of all is that of the sea-otter (*Enhydra lutris*), which is becoming rarer year by year. A good pelt of this animal will bring even the native hunter as much as a hundred roubles, while in the European market a perfect one has been known to realise £120!

133 On the morning of August 22d we came for the first time to a
137 *tûndra* of considerable size. After the gloom of the birch-forest these vast stretches of level ground have a most exhilarating effect. The feeling of oppressive stillness which but an hour or two before seemed to weigh upon us like a nightmare, disappeared as if by magic, and pushing our horses into an easy canter, we pursued our way with a sense of freedom that is rarely or never felt except by those who ride where fancy leads them over the level surface of an uncultivated plain. The melancholy, the *niedergeschlagenheit* of Kamschatka, of which Kittlitz gives such a long description in his account of the country, I confess I never felt: the converse—a purely physical feeling of delight in mere existence—we often experienced, and a good rollicking drinking song and a loose rein seemed a necessity in order to let off our stock of superabundant spirits. Long wastes of almost orange-coloured grass stretched away nearly to the horizon, only broken here and there by a still pool, or flecked by little tufts of snowy cotton-grass. Our
132 course—for we were on what a native would doubtless call the
487 "high road" to Narchiki—was marked out by long poles, some fifteen or twenty feet in height, which in winter serve to guide the traveller over the dreary wastes of snow. In the forest another method is adopted. The trees are "blazed" by a vertical slit cut in the bark by the hunter's axe. This gapes with the growth of the tree and forms a conspicuous oval mark, ten or twelve feet above the ground—a height which forcibly impresses upon the mind the depth of the winter snow. Other evidences which told us that the warm sun beneath which we were travelling was an affair of days, not weeks, were close at hand, for the snow lay in thick patches

132 at the base of the low range of hills bounding the plain,—the
finger-marks, as it were, of the icy grip of winter.

231 We reached Narchiki early in the afternoon, and were greeted
361 by the prolonged howls of innumerable dogs. Though the village
boasts of only six huts, there are over one hundred and fifty of these animals to pull the sledges of the inhabitants by day, and to endeavour, in combination with other equally hungry, though happily smaller creatures, to disturb their rest by night. The sledge-dog, indeed, appears to do without sleep, and anything more hideous than their nocturnal concerts it would be difficult to imagine. Fortunately an open-air life and hard work are not generally compatible with insomnia, and after a few nights the traveller would be more apt to miss his music than to abuse it.

133 Narchiki is placed on a little branch of the Avatcha River,
136 which is here not more than eighteen inches deep. Standing upon
226 its banks we began for the first time dimly to realise the vast
numbers of fish which must annually visit the country, and which
may be said literally to choke its rivers. Hundreds were in sight,
absolutely touching one another; and as we crossed the river our
136 horses nearly stepped upon them. Their back fins were visible as
226 far as we could see the stream, and aground and gasping in the
shallows, and lying dead or dying upon the banks, were hundreds more. The odour from these decaying fish was distinctly perceptible at a distance of a couple of hundred yards or more. In weight these salmon varied from seven to fifteen and even twenty pounds. They were for the most part foul fish,—blotchy with patches of red and white, and of the kind known by the Russians as the Garbusa;[1] but others in fair condition were to be found, and with a little trouble I was able to pull out three good ten-pound fish in as many minutes with a gaff. Any other method of fishing would have been useless. It would have been nearly impossible to make a cast without foul-hooking a fish, and nine-tenths, or more of them, were in an uneatable condition. Had we wished to do so, we

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[1] *Salmo proteus* of Pallas.

136 226 could have pulled these latter out of the water with the gaff until we were tired.

While we were engaged in procuring our supper by this simple method, a native came down and watched our proceedings. Taking a spear he went a little way up stream, and soon returned with half a dozen fish which were a great improvement upon our own selection,—for I can apply no better term to it. They were of three species:—one a long charr-like fish, of a brilliant salmon-colour beneath, but with the back dark green, and with a most peculiar lower jaw. This closes into a sort of groove or socket in front of the upper jaw, producing a very extraordinary under-hung appearance. Its native name is Gultsi.[1] The other fish were a grayling (*Thymallus*) somewhat like our own, but not so deep; and a species of trout with obsolete spots.

The vast quantities of salmon which fill the rivers of Kamschatka in the manner I have described cease in course of time to astonish the traveller, who goes down to hook his supper out of the stream as naturally as he gathers the firewood to boil his kettle. But to a new-comer the sight is an astounding one. The millions of fish that are caught, and form the food throughout the year of almost every living creature in the country, are, however, as nothing compared with the countless myriads that perish naturally. I had at first supposed that the rotting fish that lined the banks, and here and there lay piled in little heaps together, were the victims of some unexpected and fatal epidemic. But I soon learnt that there was nothing unusual in it, and that it was an annual phenomenon of as constant occurrence as the breaking up of the ice.

000 We entered one of the huts in order to eat our lunch and rest the horses before proceeding on our journey. It was combined with the stable, through which one had to pass before entering the only habitable room. This was tolerably clean, and boasted of a couple of chairs and a table; but we had already got beyond the region of glass, and the windows were made of strips of bear-gut

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[1] *Salmo callaris*, Pall.

000 sewn together. They admitted enough light, however, to show us
the strange mixture of ornament that hung upon the walls. In the
corner was the usual tawdry *eikon*, and facing it, a long array of
clippings from the "New York Police News," full of the choicest
262 horrors of battle, murder, and sudden death! Amid these lively
136 surroundings we consumed our sour milk and bilberries, and
224 bargained for some potatoes and turnips, which appeared to be
grown here in some abundance. Much, no doubt, might be done in
241 the way of agriculture in many parts of the country were it not that
the fish-harvest and hunting take up so much of the peasants' time.
Of their success in the latter line we had evidence in a fine pair of
horns of the Argali or Bighorn,[1] which lay outside the hut, and had
only recently been shot. These animals, we were told, are not
easily obtained at this season, and do not exist in any great
numbers in the neighbourhood; but in the winter they descend to
the lower spurs of the mountains, and are more easily brought to
000 bag. We much desired to obtain a head and skeleton of this
sheep, but our limited time, and Afanasi's statement that we
should be able to get them on the sea-coast about sixty miles to the
eastward of Avatcha Bay, eventually decided us on relinquishing
the idea of hunting them in this neighbourhood. We were pleased,
however, to be able to prove their existence in the interior, which
has by some previous writers been doubted.

We pursued our journey in a steady downpour of rain, our
track leading through coarse grass and other annual vegetation so
thick that from the back of a horse it was utterly impossible to see
any trace whatever of the way. Our two hunters had donned
their waterproofs,—long coats made from the intestine of the seal,
carefully sewn together with sinew. These garments are tolerably
strong in a thornless country, and though not ornamental, are as
light as a feather, and most effectual in keeping out rain. We
133 passed to the south of some hot springs, about two versts distant from
515 the village,[2] the water of which was said to be of such a temperature

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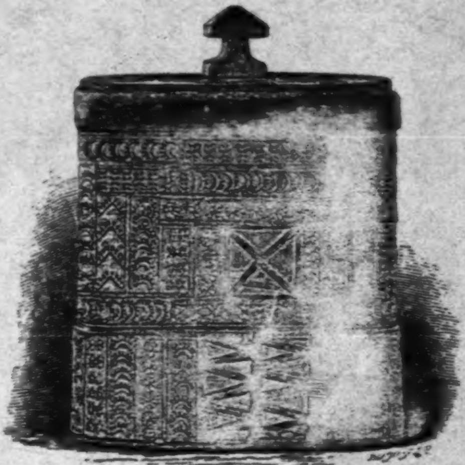
[1] *Ovis nivicola*, Eschscholtz.

[i.e. Narchiki--analyst]

133 that the hand could not be borne in it. Of these, as in Japan,
515 there are many throughout the country, and they are greatly used for bathing purposes. At Malka, between Narchiki and Gunal, there is a spring of sulphurous water of great heat, in close proximity to another which is said even during the summer to stand steadily at the freezing point. We were, however, unable to visit it, and turned northward, passing across a *tŭndra* nine miles in length, and uninteresting enough in such weather. We had the pleasure, however, of seeing Vodki deposited in five feet of water in consequence of having fallen asleep upon his horse, but it must be confessed that our amusement was somewhat damped by discovering that our own personal baggage had suffered a like immersion.

We camped once more in a birch-wood, and but for the proximity of these trees we should have had no little difficulty in making a fire, as the forest was dripping wet.
322 The birch is to the
824 inhabitant of northern
531 regions very much what the bamboo is to the native of the south. It is his general-utility tree, and without it he would indeed be badly off. The stem is used in the construction of the sledges, and the inner bark is said to be cut green and used for food. From the knotty parts of the wood good spoons are made, while the multifarious uses to which the smooth and pliant bark is adapted in the construction of dishes, cups, and vessels of all kinds are so well known by every northern traveller as to need no description. The boxes are often much



BIRCH-BARK BOX.

322 ornamented with stamped designs, and are occasionally painted, or
531 rather dyed, with blue and white; while the oval shape so commonly seen in Scandinavia is not infrequent. To the European traveller the tree is equally useful. Cups and other articles can be made with the greatest readiness; fires can be lighted in the wettest weather with the thin inflammable bark, and the inner layers of the latter form excellent writing-paper, the characters on which no quantity of rain will injure or render illegible.

133 The scenery some miles north of Narchiki begins to alter in
136 character, an alteration that is distinctly for the better. The monotony of the birch-forests is relieved from time to time by openings where the dense undergrowth is supplanted by little rocky knolls covered with bright mosses. The ground becomes more broken and the open spaces larger, and before long the country approximates closely in character to that which, in Scandinavia, would be designated the lower fjells. We had hitherto shot but little game, but here ptarmigan were abundant,[1] and we were able with ease to secure as many as were necessary for the table. Farther on, we came to a small stream, which was, most probably, an affluent of the Great Bolcheresk River, which debouches into the Okhotsk Sea on the western coast of the peninsula. It was crowded with dead and dying fish; and the remnants of some recently devoured ones upon the bank, together with fresh spoor of bear around them, told us that, in all probability, Bruin was not far off.

I had never before seen the tracks of this animal in such abundance, but farther north it was common enough to see the river-banks as much trampled as if a herd of cattle had been driven down to water. The bears at this season of the year live entirely upon salmon. Later, when this diet fails them, they take to berries, upon which they live until the time of hybernation, which is generally

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[1] Probably a sub-species of, or perhaps identical with, the Dal-ryper or Willow Grouse of Scandinavia (*Lagopus albus*). I unfortunately omitted to preserve specimens of this bird until it was too late, and we did not shoot any after we had once begun the river journey.

136 when the first heavy snow falls, at or about the beginning of the
month of October. If in poor condition the bear is said not to
hybernate till much later. According to the natives, the animals
are tolerably fat on emerging from their dens, and support themselves
on grass until the arrival of the fish.

133 Our road, some time after leaving Narchiki, had led to the
137 west, in order to avoid a range of mountains of no great height
which trends in a south-easterly direction from the village of Gunal.
We now turned north once more, and entered a beautiful valley.
To the east lay the range we had been circumventing, rising to a
height of about 4000 feet, its large patches of snow glittering in the
bright sun. The outline of these mountains was most picturesque;
and, as we advanced, we opened out a group of *aiguilles* so jagged
as to resemble a mass of inverted icicles. The valley was scantily
clothed with juniper-bushes and dwarf birches, and early autumn
had already touched the landscape here and there with patches
of bright yellow. As we rode over the ruddy ground, which
with its brilliant parti-coloured moss is so characteristic a feature
132 of northern landscapes, we put up several coveys of ptarmigan;
136 and on the outskirts of a small wood we obtained our first
231 Capercailzie, a young bird which, like many other birds of this
region, was characterised by the presence of a good deal of white
in the plumage. The day was glorious, and so hot that we rode in
our shirt-sleeves; our enjoyment only marred by the almost
constant stumbling of our horses over the stumps and roots of the
trees. The Kamschatkan ponies, which are generally iron-grey in
colour, and stand about thirteen hands, are well shaped and have
a good barrel, and are capable of a considerable amount of work.
Owing, however, to the rough usage to which they are subjected,
they are determined kickers, and obstinate to a degree; and it is
most difficult to make them lead the way, or, if behind, to prevent
them from following in the exact track of those in front. No food
is carried for them, and not content with the nightly meal they
obtain when picketed, they one and all feed in snatches as they

231 go along, an annoying habit of which it was impossible to break them. Their ordinary load is from six to seven pood.[1]

133 It was not long before the presence of some large poplars ahead,
361 combined with certain whiffs of decaying fish, to which no description
491 can do justice, warned us that we were in the neighbourhood of a
river; and the howls of sledge-dogs presently greeted us as we arrived at the settlement of Gunal. We found some of the inhabitants engaged in making a bridge,—really a very creditable affair, as the river here is about twenty-five yards broad, with a channel some six feet or more in depth. Above the village this stream—the Bolchaia-reka, or Great Bolcheresk River—splits into two or three branches, which reunite a quarter of a mile lower, after having received two rapid, but shallow little affluents from the west.

144 Gunal is a most picturesquely-situated little hamlet of about
161 twenty huts, and has a population of ninety-four souls, who are
177 all, without exception, the descendants of Russians who established
361 themselves here with Kamschatdale wives in the last century.
771 The latter people are now rare as a pure race, excepting upon the
793 western side of the peninsula. The Gunalians are all Christians,
and have built themselves a church,—a small log-cabin surmounted with a cross. Within the same enclosure, but separate, just as in Northern Sweden, is a little belfry with a single bell, time-worn and defaced. Owing to its inaccessibility, we were unable to read the inscription with which it was adorned. The church is parsonless. There are but three popes for the whole of the vast district lying between Petropaulovsky and the mouth of the Kamschatka River. Here the nearest is at Melcova, a hundred versts or more away; and once in every four months he comes in, marries and buries such of his parishioners as need it, holds service, and departs. He has not much to do, for the people are both apathetic and long-lived. In the little churchyard hard by there were scarcely twenty graves. They were marked by Russian crosses with a little

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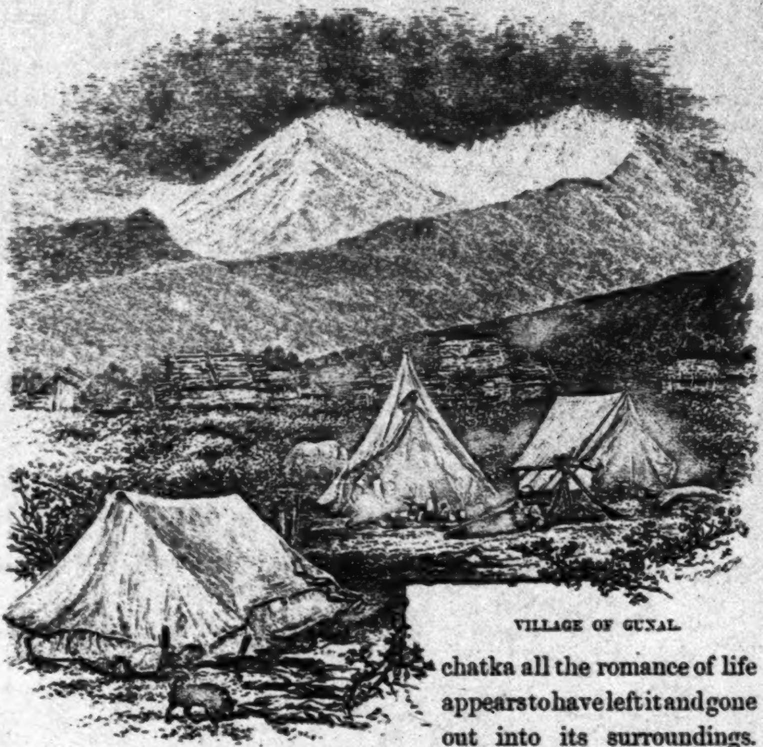
[1] A pood is equal to 36 lbs. English.

They were marked by Russian crosses with a little

177 bronze or brass crucifix roughly nailed on, but there were no inscriptions of any kind.

We pitched our camp at the edge of what, in England, would have been the village-green,—a little two-acre patch of real, short English

000 turf, at a bend in the river. It was a lovely scene. In Kamschatka all the romance of life appears to have left it and gone out into its surroundings. But, however sordid and material the lives of those whose whole existence is one constant struggle against such a climate must be, there is no doubt that nature is here as prodigal of her beauty as she is in any part of the known world. Farther north, in the neighbourhood of the huge volcanoes whose very names are unknown to the vast majority of Englishmen, the scenery is of unsurpassed magnificence. Here it was of a far less



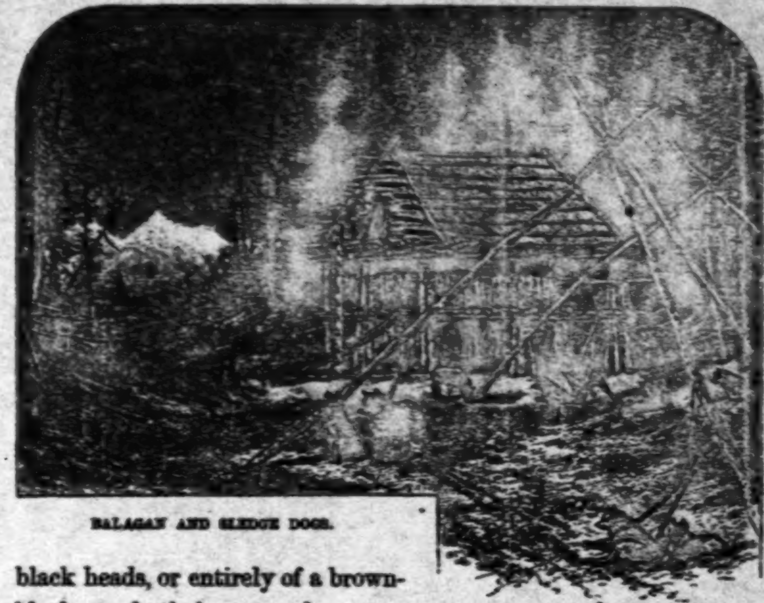
VILLAGE OF GUNAL.

000 pretentious type, but possessed, nevertheless, of a quiet beauty so perfect in its kind that the most fastidious of critics would have sought no alteration. Below our camp the river clattered between its banks of yellowing birches towards some snow-capped mountains that distance had painted a deep violet. The village, grey, battered and weather-worn, as are all these northern hamlets, nestled at the foot of the three peculiar peaks of the eastern range of the valley. Not a human being was to be seen, and the smoke of our evening camp-fire rose like a straight blue pillar into a golden sky. Around us was a stillness that could be felt,—the wondrous silence of the North; and on the summit of the little cross above the church a crow sat motionless in the evening sun,—a speck of steely blue against the snow beyond.

132 251 343 361 Gunal, with its enormous stores of salmon, seemed, like all these Kamschatkan villages, a place of considerable size. A nearer acquaintance, however, soon dispelled the illusion, and we noticed that a large proportion of balagans seemed to be used as storehouses rather than dwellings. These buildings, which differ from the fish-sheds only in having a living-room at the top, and being consequently rather more solidly constructed, are rudely made of white poplar or birch trunks, pines being comparatively unknown in this part of the country. There are rarely more than two—at most three—tiers of fish drying beneath, for the sledge-dog is an active and ever-hungry animal, and six feet would be a dangerous height at which to suspend a salmon. The roof is high-pitched, and the thatch secured by means of light poles tied transversely across it. The entrance, a low door in the gable, is reached by a sort of ladder specially contrived for the humiliation of the unwary. It is merely a notched pole, placed loosely against the building, and not secured in any way; and the incautious European attempting the ascent is somewhat astonished to find the pole rapidly revolving, leaving him clinging back downwards
000 and discomfited. This simple arrangement, if capable of being put in action at will, might possibly be of considerable utility to those

000 who suffer from a plethora of callers in our own country. I commend the suggestion to the more progressive of my readers.

231 The inhabitants of the village had already begun to get in and
492 tie up their dogs in anticipation of the coming winter. There were over two hundred of them here, and we had ample opportunity of studying their habits. Most of them are white, with black heads, or entirely of a brown-black, and their general aspect, owing to the sharp muzzle and prick ears, is decidedly wolf-like,—an appearance that one is familiar with from the sketches of North American travellers. The only food they are provided with by their masters is salmon of the hump-backed kind—the Garbusa; but during the summer, as I have already said, they pick up game, eggs, and birds in their wanderings about the country. They are usually inspanned in teams of eight or ten, but where the sledges are heavy or the roads bad, double that number, or even more, are occasionally used. When the snow is hard and even, they will



BALAGAN AND SLEDGE DOGS.

231 492 draw a weight of 360 lbs. a distance of five-and-thirty or forty miles with ease in a day's work; and with an unloaded sledge with a single occupant, a pace of eight versts an hour can be kept up for a considerable time. On the road they are given one-third of a fish twice during the day, and a fish and a half at night, which they wash down with a few gulps of snow. The dogs are castrated when puppies, and have their tails cut at the end of the first year. Each has a name, which he answers to when he is driven in the sledge just in the same way as a Cape ox in a waggon team, for no whips are used. If chastisement be necessary, the driver throws his stick at the delinquent, or pounds the unfortunate creature with any stone that comes handy. There are many ways of tethering these animals, all having in view the one object of keeping them apart, as, excepting upon the road, they seize every opportunity of fighting. One method—the one that obtrudes itself most upon the traveller's notice—is by making a large tripod of poles, and tying a dog at the bottom of each; and in many villages, owing to the large number of dogs which have to be kept, these tripods form a characteristic feature.

000 We had many reasons to induce us to take a couple of days' rest at Gunal. Louis was suffering from a chill consequent on the wetting of the previous day; one of us had a slight touch of fever caught some years before in Africa; and at the camp kitchen Cook sat a prisoner as a surgical patient, imperturbably smoking cigarettes and picking up Russian from Afanasi. A slight injury to the ankle, combined with mosquito bites and many hours of riding, had produced an inflamed leg,—a rather awkward accident at this juncture, as we wished to press on as rapidly as we could. In addition, the camp gear needed drying after Vodki's exploit, and as there were said to be plenty of bear in the neighbourhood, we settled to remain.

The following day was gloriously hot, and before long the camp presented the appearance of a washerwoman's drying-ground. The sun heat was, indeed, so great that we gladly took refuge in

The sun heat was, indeed, so great that we gladly took refuge in

132 the tent, and at noon the mercury stood at nearly 80° Fahr. in the shade. These hot days are not unusual at the end of August, and constitute a sort of Indian summer, which, as in Lapland, is but the immediate precursor of an autumn so short as hardly to be dignified by the name of a season. At sunset the temperature fell rapidly, and at night it was so cold that we were glad of four blankets, the thermometer being at or about freezing point. A range of something like fifty degrees in a single day is not often seen, but weather of an almost exactly similar kind is met with during winter on the high table-lands of Southern Africa. The Kamschatkan autumn cannot always be relied on, for, from what we could gather from the natives, it is not unfrequently attended with a very heavy rainfall, and occasionally with much wind.

136 We had hoped to find Bighorn in the mountains in the neighbourhood, but, greatly to our disappointment, the people of the village[1] told us that these magnificent sheep never come down to the lower spurs of the range before winter, and that it was useless to go after them. This was the second time we had to give up the idea of hunting them. We were, however, more fortunate with the bears, and succeeded in bringing one to bag upon the first day after our arrival.

[of Gunal--Analyst]

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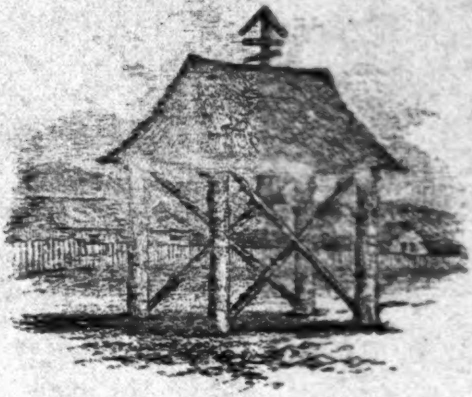
CHAPTER VI.

KAMSCHATKA (*continued*).

Abundance of bears—Ptarmigan—The Palæarctic region—Valley of the Bolcheresk—Arrive at the Kamschatka River—Dense growth of annuals—The sable—Methods of catching it—Puschina—Kamschatkan birds—Vergiaski fishes the river—Kamschatkan salmon—The Tcherritchi—Krasna—Haiko—Garbusa—Kisutchi—Gultsi—Other salmon—Habits of bears when fishing—We arrive at Sherowmy.

136 137 WE left Gunal on the morning of August 27th. Our two days' rest had done us all good, and Cook's disabled leg, which had at one time caused us some anxiety, was sufficiently well to risk going on. The injured member had not prevented his superintending the making of some most excellent bilberry jam. We had killed a fatted calf, of which, after much haggling, we had become the possessors for the sum of twelve roubles; and the carcase had been duly converted into veal and a good supply of stock. From our saddles hung several couple of mallard, and the larder on the whole was in as satisfactory a condition as it well could be. We had woke to a heavy mist, which rendered even near objects distinguishable with difficulty, but it lifted gradually under the rays of a bright sun, and before we were well off, and had turned to catch the last glimpse of the beautiful scenery around our late camp, the day had become all that the most *exigeant* of travellers could desire. Under hot suns like these the signs of autumn appear with wonderful rapidity, and we noticed that the tints were distinctly brighter than they had been but three days before.

133 137 We passed two of the level seas of marshy ground that for lack of a better name I have hitherto called *túndras*. The term is, strictly speaking, applied only to the vast stretches of ground of this nature that are so wearisome to Siberian travellers. Here, however, the only difference lies in the size, and as we have no corresponding English word, I have preferred to retain the Russian name. The thick forests of birch were no longer to be seen, and the country, though still wooded, was more open, large clearings being not infrequent. The familiar monkshood, too, whose spikes of flower are in Kamschatka snowy white, as well as of the ordinary shade of violet that our English gardens exhibit, had almost entirely disappeared, and we saw but little more of it during the rest of our journey. The number of bilberries was enormous, but the cranberry was much less abundant, and its berries as yet were hardly ripe.



BELFRY AT GUNAL.

Riding quietly along in advance of our party, we suddenly came almost upon the top of two very fine bears, with a young cub between them. We were unfortunately without our rifles at the time, and before we could get them the animals had made off,

133 greatly to our disgust; and, though we spent some time in following
137 them up, we did not succeed in getting sight of them again. They had doubtless got scent of us, and were far away. Bears are always much more disturbed by getting wind of human beings than by any noise the latter make, or even by their appearance; and the hunter, although his movements are by no means those of the stealthy-footed Malay, knows that unless he works to windward his trouble is in vain. The number of these creatures in Kamschatka must be enormous. Afanasi told us that there are hunters who have killed over four hundred in their lifetime, and we heard that at a little hamlet on the Bolcheresk River more than ninety had been shot and trapped during the summer. July, August, and September are the best months for them, as they haunt the river-banks at that season for the fish, and are in most excellent condition.

The heat at noon was nearly as great as it had been on the previous day, and the business of supplying our larder with ptarmigan for the many mouths we had to feed involved a very considerable amount of exertion; and, as we ploughed through the soft moss, sinking up to our knees at every step, "larding the lean earth as we walked along," it was difficult to realise that at night-
000 fall we should be back again in an Arctic climate. The birds were luckily tolerably abundant, and we had obtained a sufficient number on pitching camp for the night. Capercailzie apparently were rare. We had seen but few, and up to this period had only succeeded in obtaining one, and our game-birds were consequently limited to the Willow Grouse.

The Englishman travelling in Kamschatka who has reached his destination, not by the desert steppes of lonely Siberia, but by way of Ceylon and sweltering Singapore, where almost every bird he sees is unfamiliar to him, cannot fail to be struck, however unobservant he may be, with the resemblance of the avifauna of the new region in which he finds himself to that of his own country. He disturbs a Turnstone or a Golden Plover as he lands, perhaps, 000 and notices a familiar-looking wagtail running along the well-trodden paths of the settlement. Overhead, maybe, hovers some bird of prey, which he may recognise as an Osprey or a Hobby; and as he shoots his first grouse, or notes a woodpecker tapping at a tree hard by, he identifies them, or at least thinks he identifies them, with like species he has met with in his own or some Norwegian wood.

In the majority of cases he is right. In others he is, at all events, not far wrong. For, in consequence of the similarity of the fauna which extends over the whole of Europe and Northern Asia, zoologists have been led to group these countries together under the name of the Palæarctic Region, and the species which are common alike to Great Britain and Eastern Siberia are numerous.
136 Kamschatka abounds with birds of wide range with which the European traveller is quite familiar, but its peninsular position has at the same time had a certain influence towards the creation of representative forms, among which those of the Great and Lesser Spotted Woodpecker,[1] the Capercailzie, and the Marsh Tit may especially be instanced. In all these the differences consist for the most part in the greater predominance of white in the plumage, and this tendency to albidism is noticeable, as I have already mentioned, in other animals besides the birds; the dogs and horses likewise showing it in a marked degree.

000 We wasted some time of the morning of August 28th in tracking a large bear that Afanasi had wounded on the previous evening.

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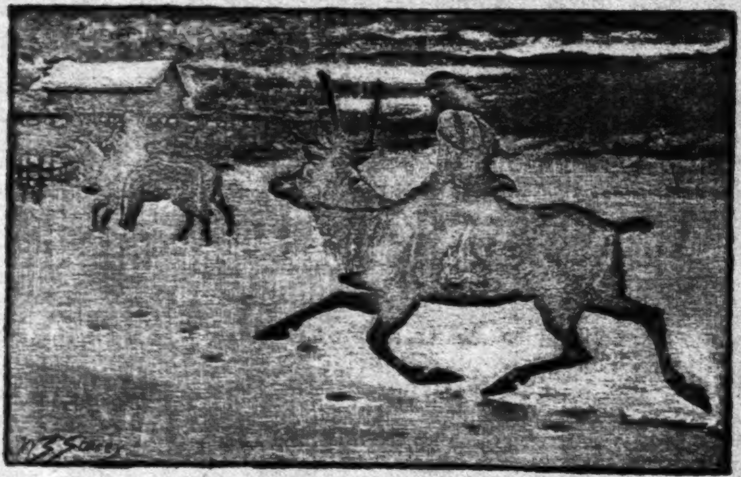
[1] *Picus pipra*, the eastern form of our *P. minor*, is found over the greater part of Siberia, and even in Japan. Kamschatkan individuals are noticeable as exhibiting the characteristics of the species in a more marked degree than those of the adjoining continent. In the same way the *P. major* of the peninsula differs from that of Europe, and has recently been raised to specific rank by Dr. Stejneger as *Dendrocopos purus*. It differs "in having the breast and upper abdomen very pure white, the white of the lateral rectrices without, or almost without, dark markings, and possessing a white spot on the outer web of the longest primaries near the tip." The specimens that we obtained in our journey through the country bear out this description except in the last-named particular. Both these woodpeckers were comparatively common in the country round Gunal.

000 He had been hard hit, and marks of blood were plentifully visible
as we took up the spoor. The vegetation was, however, so thick,
and everywhere so overrun with the trail of these animals, that
before long we had to give up the search, in spite of the aid of
133 Verglaski. We therefore returned, and striking camp, proceeded
136 up the valley of the Bolcheresk River, as on the previous day.
The river here runs due south through a flat plain covered with
yellow grass and about three or four miles in width. It is hemmed in by mountains which are at first of no great height, but as the head of the valley is approached the scenery becomes finer. We rode towards it under heavy rain, but before long the weather cleared, and disclosed to view a gloomy gorge on our right, about eight miles distant, from which the river evidently debouched. At the same time another valley became apparent, joining in from a north-north-westerly direction, and the stream which flowed through it appeared to have the same source as the Bolcheresk, or at least to rise at no great distance from it. We had got at last to the head waters of the Kamschatka River!



REINDEER RIDING, KAMSCHATKA RIVER.

133 Early in the afternoon we arrived upon its banks, and it was
with no little interest that we inspected the river that was to bear
us some four or five hundred miles upon its bosom before we
reached the sea. It was a little stream barely fifteen yards across,
and not more than a foot or eighteen inches in depth. The
Bolchaia-reka, which we had just left, had been teeming with fish,
but here not one was to be seen, and the disgusting smell of decaying
salmon that is in Kamschatka the almost invariable sign of
000 the proximity of a river, was conspicuous by its absence. In a
small grove of trees close by we found two rough log-cabins, which
had doubtless been the winter quarters of some sable-hunters.
They were deeply sunk in the ground, and by their dilapidated
condition, had evidently been built many years ago. We were not
sorry to find them, as it was our intention to camp here and try for
bear, and at the same time, if possible, to explore the source of the
two rivers. To our great disgust, however, the presence of a kettle
hanging on a stick, and the yet warm ashes of a camp-fire, spoke in
unmistakeable terms of the ground having been so recently disturbed
as to render our chance of sport in the immediate neighbourhood
but a poor one. We accordingly pushed on, and after riding for a
couple of hours, struck the river once more at a most picturesque
bend in its course. The ground in the vicinity was covered with
fresh bear-tracks, and thinking we could not do better, we once
more prepared to camp. At this juncture Vodki appeared, and
begged us to try farther on, where the ground was everything that
was perfect, and the bears in incalculable multitudes. "Just one
verst more, little father." For the first and only time we yielded
to his advice, and resumed our march. Verst after verst was passed
and still it was "one verst more." Two hours and more elapsed
before we began to realise that we had been befooled. To be
befooled by Vodki!—the thought was too galling. Not in the best
of tempers, we altered our course for the river at once, debating
what form of punishment we should adopt. Our trouble, however,
was saved us. Vodki, in no better temper than we at his plans

000 having failed, kicked one of the packhorses violently in the belly while unloading it. The effect was excellent. The poor animal, who, like the Pope's mule in Daudet's charming little story, had many an old score to pay off, turned round and bit his aggressor so successfully in the face as to leave him with a portion of his cheek hanging down. Here we interfered to prevent reprisals, and while the conqueror was led off to a patch of the most succulent-looking grass we could find, Vodki retired to his tent to nurse his wound for the next two days.

133 Accustomed as we had become during the earlier part of our
137 journey to the wonderfully dense growth of the annual herbage, especially in the birch-forests and in the vicinity of the rivers, I do not think we had ever seen it in more rank luxuriance than we found it here. Our camp was pitched on a little eminence two or three hundred yards from the river, but the latter would have been almost unapproachable had it not been for the numerous bear-tracks that led in every direction through the forest of grass. As it was, the vegetation rose three or four feet above our heads, and was in places so thick that we could never be sure that our next footstep would not precipitate us into one of the hidden streams with which
000 the marshy ground abounded. In such ground shooting is almost impossible, and the only plan is to lie up in concealment on the banks of the river, on the chance of a bear coming out in the neighbourhood to fish.

We spent the remaining two or three hours of daylight in this monotonous and chilling amusement, and rose wet and stiff with cold without any success having attended us. The bears had in all probability deserted this part for some other place where fish were more numerous, and the only recent spoor we saw was that of an otter, an animal that is apparently far from common in the peninsula.

136 The following morning, since there appeared to be no fish in the river, we put our rods together and tried a fly in Kamschatkan waters for the first time. Paradoxical as it may seem, a river of

136 this kind presents the only condition under which this sport is feasible, at least at this season. With the river choked with foul and dying fish, where every cast would foul-hook a fish that would be uneatable on landing, it is of course an impossibility. Here the stream was free from salmon, but though we hoped to obtain some trout or grayling, it seemed to be equally devoid of these also; and having spent an hour or two without getting a rise, we returned to camp. We found that one of our party who had been out after capercailzie had been fortunate enough to shoot a sable. The animal had been found by Verglaski, who had chased and treed it, and in spite of its not being, from a hunter's point of view, in full condition, it had been duly added to the bag. Our hunters told us that it was extremely rare to see sable at this time of year. The winter coat had begun to grow, and was, indeed, of tolerable
136 length and quite fast. In spring, although the winter fur may be
224 still on, the pelts are said to be quite useless, as the hair drops out even after the skin has been prepared. The animal measured twenty-seven inches in extreme length; the tail, which was not furnished with the thick brush so characteristic of the winter skins, seven inches; and the value of skin in the Petropaulovsky market was estimated by Afanasi at four roubles. The price given for winter sables is, as I have already stated, sixteen roubles.

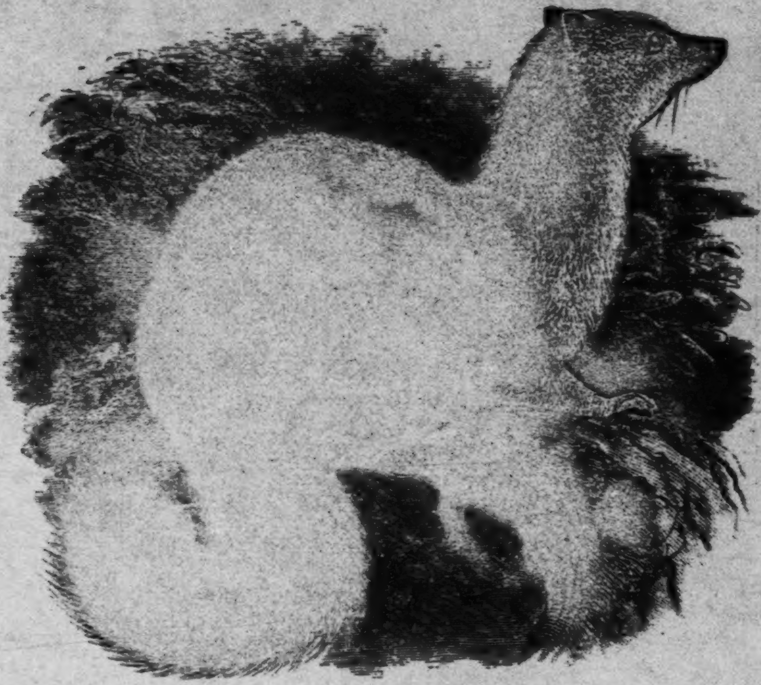
The sable is always skinned from the tail—bag-shaped—and while performing this operation in the approved fashion of the country, we listened to a sermon on sables and sable-hunting from Afanasi. They are, he told us, for the most part of nocturnal habits, and, though they occasionally feed by day, generally spend that period of the twenty-four hours in holes at the roots, or in the trunks of trees. They dislike the presence of man, and are rarely to be found in the neighbourhood of the villages; their favourite resort being the depths of the forests least frequented by the natives. It is considered that the most inaccessible and least known parts of the country are the best hunting-grounds. They live on hares, birds of all kinds, and in short, almost any living

136 thing they can kill, but they are also said to eat berries, and even
224 fish. There are, indeed, but few animals, apparently, which do not
live on salmon in Kamschatka. They have only one litter during the year, generally in the month of April, and bring forth four or five young at a birth in a nest in the holes of trees. When the hunter is bitten for the first time by one of these animals, the bite is almost invariably followed by severe illness; but on subsequent occasions no ill effects, with the exception possibly of slight inflammation of the wound, are produced.

There are various methods employed in catching sables, but a less number are trapped now than used formerly to be the case. Dogs are almost invariably employed, to run them down in the deep snow or to tree them; and they are also smelt out by these trained animals in their holes at the roots of trees. The great object is to tree the sable if possible. The hunter then surrounds the base of the tree with nets, and either shakes down his quarry or knocks it off the boughs with sticks. If it does not fall into the net it is run down by the dogs, or compelled again to take refuge in a tree. Should the tree be too high for this method to be successful, it is cut down, or the sable is shot; but the hunters generally avoid the use of the gun if possible, as it is apt to spoil the skin.

The hunters usually start on their winter's expedition towards the end of September, if their destination be a distant one. If it be in better known country and closer at hand they wait until the first snows have fallen, and do not leave before the middle of November. They train dogs especially for the purpose, and a good sable dog is one of the most valuable of a Kamschatkan hunter's possessions. A catch of twenty sables in a season is considered exceptionally good. Jacof Ivanovitch and one of our horse-boys, in company with two other hunters, had on the preceding winter tried some new ground on the shores of the Kronotsky Lake, and had been particularly successful. Jacof had only succeeded in killing fifteen, but our horse-boy had bagged no less than forty; and the total

133 number killed by the party was close on one hundred and twenty
172 skins. The Kronotsky Lake, which has never yet been visited by Europeans, lies south of the great group of volcanoes at the mouth of the Kamschatka River, and some sixty miles east of Melcova.[1] It is now completely deserted by the natives, but, as far as we could gather from our hunters, it has remains of ancient lake-dwellings on its shores, with deposits of shells and other objects of like nature resembling the *kjokken-möddings* of Northern Europe which, as far as I am aware, are unknown in the country at the present day.



SABLE.

Of the number of sables killed annually in Kamschatka it is

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[1] Both Melcova and the lake are wrongly placed on the Admiralty chart; the former is nearly ninety miles north of its assigned position!

Of the number of sables killed annually in Kamchata it is
224 difficult to form an estimate. The greater portion no doubt are
438 exported *viâ* Petropaulovsky, this port draining the large extent
434 of country in the region of the Kamschatka River, but a good
563 many must find their way to Bolcheresk, and some others to Tigil, a settlement in the northern part of the peninsula which has only a difficult communication with the villages on the lower part of the Kamschatka. In Petropaulovsky almost all the skins pass through the hands of the "King of Kamschatka,"[1] and the number exported by him for the season of 1882 was over two thousand. The profit on each skin probably averaged at least forty shillings, and it must be allowed that, however gloomy the outlook in Hudson's Bay and elsewhere may be, there is at least one part of the world where the fur-trade is not "played out."

We left camp again on the morning of August 30th, and after two hours' travelling came to the little village of Puschina, if village indeed it can be called. It now appeared that Vodki's plan had been to get us on to this place if possible, partly because he preferred a hut to tent life in wet weather, and partly, according to
161 Afanasí, because he was afraid of the bears. Puschina consists of
177 three huts only, with the usual proportion of fish-drying sheds,
361 and boasts of a population of fifteen souls. In 1787, according to Lesseps, it was larger than Gunal. The inhabitants appeared dirty and miserable creatures, and were more of the true Kamschatdale type than any others we had yet come across. One or two of the huts or storehouses were raised above the ground on pillars, and much resembled a Norwegian *stabur* in appearance, except that there was a complete absence of carving. It is rare to see any settlement in Kamschatka which is not placed actually on the banks of a river, but Puschina, standing two or three hundred yards away, is one of the exceptions, probably owing to the fact that the banks of the stream are here very low, and the rise of the river during the period of the melting of the snows is often very considerable.

We rested our horses and obtained a draught of fresh milk

[see page 74--Analyst]

234 We rested our horses and obtained a draught of fresh milk before resuming our march, for at almost all these settlements cows are kept. The milk is generally very rich, and is one of the few luxuries the country affords the traveller, unless, indeed, the cows should happen to have been feeding on the wild garlic. What effect the diet of half-rotten fish on which the poor animals feed in winter may have, I do not know. We noticed, however, that many of the birds we shot and preserved on the expedition smelt strongly of decaying salmon.

During the land journey[2] the actual number of species of birds we met with was but limited, although individuals of some kinds were sufficiently abundant. The Capercailzie (*Tetrao parvirostris*, Gray), though not unlike the European species with which Scotch and Norwegian sportsmen are familiar, differs from it in several particulars. It is markedly smaller in size, shows a strong tinge of grey on the upper surface, and is especially characterised by the tendency to white in the plumage. The feathers of the wing coverts and those of the prolonged upper and under tail coverts are broadly tipped with this colour, and the general appearance of the bird is very handsome. The forest districts are poor in bird-life; the woodpeckers I have before described, small flocks of buntings (*E. rustica*), bramblings, and two species of the genus *Parus* were almost the only noticeable kinds. One bird, however, which I have not yet mentioned, appeared tolerably common—the sober-coloured, but graceful dark ouzel (*Merula obscura*, Gmel.) I met with it many months later, amid very different surroundings, in the depths of a Bornean jungle. It is migratory in its habits, nesting in Siberia and passing the winter in the Malay Islands.

By the rivers there is more life. Many of the so-called sea-birds haunt the streams for a considerable distance inland, and at Stari-ostrog we found large flocks of a gull closely resembling our own Kittiwake (*Rissa tridactyla*). A graceful tern (*S. longipennis*, Nordm.) was almost equally numerous at the same place, but we did not again meet with it for some time, and on our return to Petropaulovsky it had already departed for the warmer regions of

[2] [from Petropavlovsk to the headwaters of the Kamchatka River--Analyst]

136 the south. Corvine birds are abundant wherever there are fish, and large flocks of the common crow (*C. corone*) are always to be found perched on the trees in the vicinity of the rivers, or pecking at the piles of dead fish rotting on the banks. The familiar chatter of a magpie, which differs but slightly from our own bird, is as common a sound in Kamschatka as it is in England, and the rigours of an Arctic winter appear to have had no sobering effect upon his character.[1] Ravens too are here, and by the side of the stream runs the Wood Sandpiper (*T. glareola*), almost the only bird of this genus that we noticed on our journey. The surface of the water is dotted with various species of duck, of which mallard and teal[2] are perhaps the commonest. Like everything else, they too seem to regard the dead salmon as a source of food, for in many of those we shot the crop was full of maggots.

We halted for our mid-day meal on the banks of a little stream a few versts beyond Puschina, and while engaged in discussing our wonted dish of cold grouse a fine eagle flew over us, which we were fortunate enough to secure. It was only winged by the shot, and made such a determined resistance to our efforts to secure it, that we eventually had to give it the contents of another barrel. It proved to be a female Erne (*Haliaëtus albicilla*) in not quite mature plumage, measuring six feet eight inches across the wings. The crop contained the remains of salmon, and the bird smelt so atrociously from its prolonged fish diet, and was so fat, that the operation of skinning it was anything but a pleasant one. It was the first example we had obtained, but we afterwards found the species common towards the lower part of the Kamschatka River. The magnificent Pallas's Eagle (*Thalassaëtus pelagicus*) we did not meet with until we had reached the neighbourhood of the great volcanoes.

000 While we ate our meal we watched Verglaski, slow-moving

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[1] This species is another instance of the tendency to white in the birds of this region. It has the extension of that colour on the wings characteristic of the Central Asian Magpie (*P. leucoptera*, Gould), but even more developed.

[2] The Teal were of two species—*Q. crecca*, and another, of which we did not preserve any specimens. It is, I believe, *Q. falcata* of Pallas.

000 and solemn as ever, occupying himself in securing his own dinner. He waded leisurely into the stream, just as a bear would, and stood placidly watching the water for his prey. He was evidently an old hand at the business, and would have sniffed disdainfully at any ordinary kelt. No miserable half-dead Garbusa, such as sledge-dogs are fed on, would have contented him. As a bear-dog, he felt such diet to be beneath him, and, like a true fisherman, looked out for the clean fish. There were not many of them, although the half-rotten corpses on the bank spoke of the numbers of salmon that had at an earlier part of the year frequented the stream. I cannot hope to convey to my readers any idea of the enormous multitudes that yearly visit the rivers of Kamschatka. Krasheninikov, writing more than one hundred years ago, says, "The fish come from the sea in such numbers that they stop the course of the rivers, and cause them to overflow the banks; and when the waters fall there remains a surprising quantity of dead fish upon the shore, which produces an intolerable stink; and at this time the bears and dogs catch more fish with their paws than people do at other places with their nets."[1] We had no opportunity of seeing the advent of the salmon, owing to the lateness of our visit; and the death of the fish is of course not due to the subsidence of the water, as he seems to imply. But that the rest of the statement is devoid of exaggeration we had abundant opportunities of proving. None of us, unfortunately, were ichthyologists, and the rapidity with which we were obliged to travel through the country, combined with difficulties of transport and the want of spirit and receptacles, prevented our preserving specimens. In the following paragraphs I have embodied my notes upon the salmon of Kamschatka with the statements we obtained from our hunters.

136 Every year the various kinds of salmon arrive at the mouths of the Kamschatkan rivers with surprising regularity. The date of the advent of these different species extends from May to mid-

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[1] "The History of Kamschatka," translated by James Grieve, M.D., Gloucester, 1764, p. 143.

136 August; but each has its own time of arrival, which, from its constancy, appears to be more or less independent of seasonal influences. A few fish apparently remain at or about the river mouths during the summer, and eventually return to the sea, but these are so few as to be scarcely worthy of mention. The vast majority—practically all, in fact—ascend the streams to spawn, and, having once done so, die. In the case of some species every fish appears to perish; in others, to which I shall refer, a few get back to the sea.

The kelts of these salmon exhibit, though in a far more intensified degree, the changes that are noticeable in our own salmon after spawning. The jaws are prolonged and hooked, and the teeth much developed. The back becomes somewhat humped—in one species enormously so—and the skin of that region so hypertrophied and spongy as to conceal the scales. Simultaneously the colour of the body surface changes, becoming livid or dusky, and blotched with red patches, or even entirely red. The flesh gets paler in colour and tasteless, and the whole aspect of the fish denotes its unfitness for food. As they ascend the river the salmon keep close together in large shoals, each fish keeping to the shoal of its own species and not mingling with others. Later in the year, after spawning-time, they of course become indiscriminately mixed.

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825 During our visit to, and journey through the country, we met with at least six different species of the Salmonidæ in abundance. That there were others I am quite sure, but in the following list I have limited myself to noticing those only about which we personally obtained information:—

1. *Oncorhynchus orientalis* (Pall.)—Known to the Kamschatkans as the Tchervitchi, this fish is the king of the Salmonidæ both as regards size and flavour. On first arrival the Tchervitchi is silvery, the back and upper surface dark, and marked with dark spots, which also extend on to the dorsal fin and tail. The fish may have a length of four feet or more, and are rather broad: their extreme

136 weight was given by Afanasi as "over two poods," which would be
226 72 lbs. We did not see any fish of this size, but a salmon, most
825 probably of this species, was caught by the *Dido's* men in 1855, the weight of which is given by Tronson as 76 lbs. There is no doubt that they commonly run to as much as fifty or sixty pounds. The Tchervitchi is proper to the Kamschatka and Okhotsk Seas, apparently not being found elsewhere. According to Steller, it only frequents the larger rivers, and does not exist to the north of the 56th parallel. He gives the date of its arrival as April 20th for the Kamschatka River, May 10th for the Bolchaia-reka, and June for the rivers in Avatcha Bay. According to Afanasi, it comes up the Kamschatka River "early in May," and gets out of season in July. It certainly appears, as far as we could learn from the natives, to wait for some days at the mouths of the rivers before ascending them, which it does in shoals so large that, as Pallas tells us,[1] a little wave of water is driven up in front of them.

We did not meet with the Tchervitchi until we got to the Kamschatka River in early September. The inhabitants had then long since ceased catching them, and very few remained in the river. The balagans and drying sheds were, however, full of them, and many seemed not to have been in quite clean condition at the time of catching. As a kelt, the fish becomes marked with red on the sides, producing a streaked appearance, and the rostrum becomes hooked, especially in the male, though apparently not nearly to the same extent as in the Garbusa and other species. From the time of entering the river the Tchervitchi is said by Pallas never to feed. We made no inquiries of the people as to this point, but they told us that a certain, though very small proportion of this species do not die, but manage eventually to regain the sea. The flesh is of a rather pale red in colour, and is esteemed by the natives above that of any other fish.

2. *Oncorhynchus lycaodon* (Pall.)—This salmon is known to

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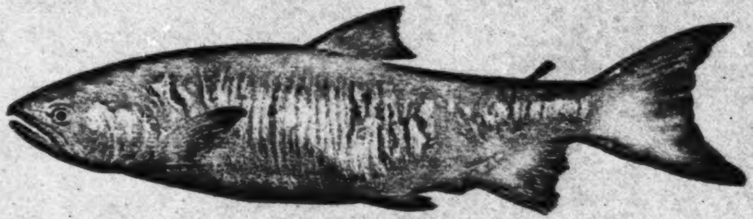
[1] "Zoographia Rosso-Asiatica," vol. iii. p. 368.

136 Kamschatkans[1] as the Krasnaya riba or red fish, but the name is
226 invariably shortened to Krasna. In shape and general appearance
825 it resembles our own salmon. On its first appearance in the rivers it is silvery, the belly white, the back dark with a bluish shade and almost without spots. In length it reaches three feet or more, and large examples would, I should think, scale over thirty pounds. It is found in the Okhotsk and Kamschatkan seas, and extends across to the American coast.[2] In the peninsula it seems to frequent large and small rivers alike, ascending the streams about the end of May or beginning of June, later than the Tchervitchi, but before the Haiko and Garbusa. Towards the end of August the Krasna is completely out of condition. It becomes a bright red all over like a gold fish, and both jaws get prolonged and hooked, while at the same time the teeth are wonderfully enlarged. None of the fish ever reach the sea after spawning—at least so we were informed by the natives;—and as this species is one of the most plentiful of all the Kamschatkan salmon, their bodies strew the banks in nearly as great numbers as the Garbusa.



KELT OF HAIKO. (*Oncorhynchus lagocephalus.*)

3. *Oncorhynchus lagocephalus* (Pall.)—The trivial name of this fish is given by Steller[3] as Kaiko, but we found it invariably known as the Haiko. It is not unlike the preceding species (*O. lycaodon*),

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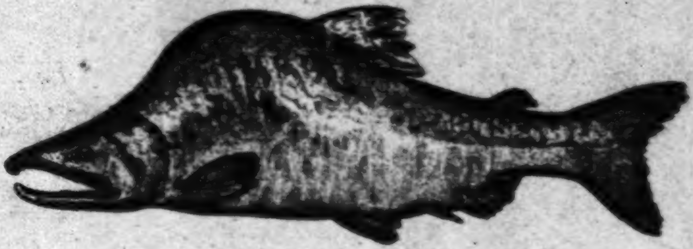
[1] I have here and elsewhere used this term comprehensively as "an inhabitant of Kamschatka." It should not be confounded with Kamschatdale—the name applied to one of the original races inhabiting the peninsula

[2] Steller, "Beschreibung von dem Lande Kamtschatka."

[3] *Op. cit.* p. 157.

136 the back being dark greenish, the sides silvery, and the belly white,
226 but it differs in the greater bluntness of the rostrum and the pale
825 colour of the flesh. It appears, as a rule, to run smaller than the Krasna: its area of distribution is said to be similar. It arrives at the mouth of the Kamschatkan rivers some little time after the Krasna and Tchervitchi, but its advent coincides more or less with the Garbusa or Hump-backed Salmon. About mid-July[1] this species ascends the streams, and is caught in great numbers. Later, the kelts show much the same changes as those of the Krasna, the jaws becoming much hooked; but they never acquire the deep and generally-diffused red of the latter species, that colour being usually confined to small patches on the belly and under surface. A species of bread is said by Kittlitz and others to be made of the Haiko, but we did not see it.



KELT OF GARBUSA. (*Oncorhynchus proteus.*)

4. *Oncorhynchus proteus* (Pall.) is known to the inhabitants of the country as the Garbusa or Hump-back. On arrival from the sea this fish is said to be without any trace of the extraordinary development of the back from which it takes its name. It is without spots, except upon the tail—which is deeply forked—and is very silvery. It is said to frequent the rivers of the Okhotsk Sea and those of some of the Aleutian Islands, as well as Kamschatka. Roughly speaking, its length is from eighteen to twenty-four inches,

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[1] I have also got "mid-June" in my notes, but I think the date given above is probably the correct one.

136 and its weight seldom above fifteen pounds. As a rule it is
226 considerably less.

825 The Garbusa swims up the rivers in company with the Haiko, and is the most abundant of all the Salmonidæ in Kamschatka. According to Pallas, the hump begins to appear even before the fish has spawned, and is generally supposed by the natives to result from the efforts made in ascending the stream! Its enormous development in the kelts can best be realised by reference to the annexed illustration. Both jaws become hooked at the same time, more so, perhaps, than in any other species, and in consequence, in an old kipper the mouth does not nearly close. Until the death of the fish the gibbosity increases, and the colour of the body-surface becomes more and more livid and brown, the sides and under part being irregularly blotched with blood-red. The vast majority of this species die in the month of August, and though some few live till the middle of September, the natives told us that none return to the sea. The flavour of the flesh is said to be very good when the fish first come up the river, but the Garbusa is looked upon almost as the dogs' private property, and is not much eaten by the natives. In the balagans and drying sheds it invariably occupies the lowest tier of all. The female fish is described by Pallas as much smaller than the male, and very much less numerous; the hump does not become so largely developed and the mandibular hooks are absent or slight. We did not, however, meet with many individuals agreeing with this description.

5. *Oncorhynchus sanguinolentus* (Pall.) is the Kisutchi of the Kamschatkans. The clean fish is silvery, and devoid of red colouration, despite its specific name. The dark greenish-brown back is marked with rather large black spots, and the snout is blunt, becoming afterwards developed in a most peculiar manner. Pallas says that the largest measure three feet and weigh from ten to twelve pounds,[1] but it is evident that a fish of this length would weigh considerably more. Most of those that we saw towards the

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[1] "Zoographia Rosso-Asiatica," vol. iii. p. 379.

136 lower part of the Kamschatka averaged, I should think, about
226 twelve or fifteen pounds; the extreme weights, at a rough guess,
825 being eight and twenty-five pounds.

The Kisutchi is the last of all the salmon to ascend the rivers. It arrives about the 10th or 12th of August, and in consequence is in good condition when most of the other species are uneatable. In the middle of September we found the majority of them clean fish, and it is not till the following month that they usually acquire the blood-stained tinge of the under surface, and the extraordinary snout to which I have just alluded. The latter presents a smoothly rounded protrusion about as large as a sixpence, over-hanging the lower jaw, and giving the fish a very comical expression. We learnt from our two hunters that the Kisutchi were caught until November, and Krasheninikov tells us[1] that they are found "during the whole winter in those springs that run into the Kamschatka from the south," which is possibly due to the fact that the water of some of these streams is warm. It appears to be a generally-distributed species, occurring in all the rivers of the peninsula. The flesh is very pale, almost white.

114 6. *Salmo callaris* (Pall.) is the Goletz or Gultsi of the natives.
136 Krasheninikov says[2] that "the largest fish of this species, which
226 lives sometimes five or six years, comes from the sea into the River
825 Kamschatka, out of which it goes into the rivers that run into it,
and by them to the lakes, where it grows almost as big as the *Chavitsi* (Tchervitchi), though it seldom weighs more than twenty pounds. They are found likewise very large in the Bistroy River; there their length is commonly twenty-eight inches, and breadth ten; they are of a dark colour,[3] have large teeth, and the lower jaw is crooked with a knob: it seems indeed of a different species. Those of three years old, which have been one year out of the sea, have a long head, are of a silver colour, with small scales, and

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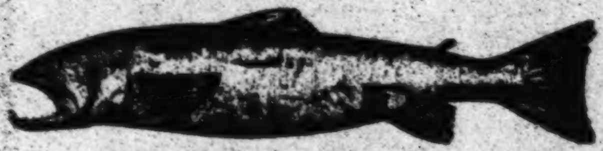
[1] "The History of Kamschatka," p. 148.

[2] *Op. cit.* p. 149.

[3] Steller also says, "auf dem Bauch und Flossen Zinnober-roth."

114 small red spots; and such as have been two years out of the sea
136 are round and longish, with small heads; and their flesh, which is
226 reddish white, is hard and well tasted. With regard to their size,
825 the first year they are long and small; the second they grow more in breadth than in length; the third the head grows considerably; and the fourth, fifth, and sixth years their breadth and thickness increases greatly: in the fourth year also the lower part to the snout becomes hooked."

Pallas adds that "these fish enter the rivers from the Eastern ocean in great numbers . . . in order to hybernate, being still without spots. They are said to remain torpid during the winter in the depths of rivers, in shoals of thousands, until at the return of spring they seek the sea again, from about the 10th to the 20th of May. They surmount cataracts of whatever height by leaping, and in the same manner escape from nets one fathom deep. They force their way into the Kuril Lake near the River Kamschatka,[1] notwithstanding a very high cataract, and hybernate in it in large numbers. Many remain for a long time in the rivers and lakes, but the greater number return in spring to the sea. When they come up from the sea they are without the red tint and spots, and shine with a silvery lustre; during the ascent they become gradually spotted with red, while they acquire a more or less red tint beneath the belly and on the fins, according to the comparative rapidity of the river currents."



[illegible] (*Salmo callaria.*)

Both the above accounts are very difficult to reconcile with that

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[1] It is difficult to understand what lake is here meant. The Kuril Lake is at least 170 miles distant from the nearest point of the Kamschatka River.

114 given us by the natives of this fish. In the first place the Gultsi,
136 as pointed out to us, was a long fish with somewhat rounded sides;
226 the under surface of a most beautiful salmon-colour, the body
825 marked with pink spots, and the back and upper surface dark
greenish. The fish were in perfect condition, the coloration being evidently normal, and not due in any way to disease. To a piscatorial, though un-ichthyological eye they were Charr; a fish with which I was quite familiar in Lapland lakes and rivers,[1] but they differed in having the curious, upturned lower jaw to which I have already alluded.[2] The fish that Steller mentions, with their great breadth (depth) of ten inches, cannot well be of this species; and their migratory habits, and the fact that when they come from the sea they are "without the red tint and spots," is, I believe, opposed to what is as yet known of the life history of the Charrs. The natives distinctly told us that the Gultsi remains in the rivers throughout the year.

Two other species of salmon are mentioned by Steller as occurring in Kamschatka:—the Kundsha (*S. leucomænis*) and Mykysha (*S. purpuratus*), but we did not meet with either of them.

133 Late in the afternoon we arrived at some open grassy pools, the
136 head of a small affluent of the Kamschatka River. Mallard and teal
were abundant, and having refilled our larder, we turned our attention to the numerous salmon that were splashing about in the shallow water. Whether owing to the fact that the stream was slightly warm or not I cannot say, but the majority of the fish were in better condition here than we had hitherto generally found them, and were in consequence less easy to gaff. After a few minutes' waiting we were, however, able to obtain our supper in the shape of two or three fine Kisutchi of from ten to fifteen pounds weight.
000 Salmon is never eaten to such perfection as in camp-life, where the
interval between its death and digestion is reduced to a minimum;

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[1] In some of the lakes in Lapland the Charr grows to a very large size. I have seen one which scaled over fourteen pounds.

[2] *Vid. ant.* p. 99.

000 and whether boiled or fried in steaks, the fish has a delicacy of flavour that is rarely met with at a civilised dinner-table. But, of all methods of cooking it, one is pre-eminent in its excellence. Cleaned, split, and gutted, the salmon, which should be a small one, is impaled upon a Y-shaped forked stick, and placed half over the fire, so that it may be exposed to the occasional action of both smoke and flame. A certain amount of attention is necessary to see that it does not get too much of either, and care should be taken to turn it tolerably frequently. But if properly done—and, those who have tried it will bear me out—the dish is one fit for the gods, and loses nothing from the simplicity of the necessary apparatus.

We broke camp at noon on the following day, being within easy distance of Sherowmy, where we calculated on beginning our river journey. A heavy shower fell as we were striking the tents, wetting much of our baggage and our ornithological specimens before we could get them under cover, but the weather soon cleared, and we continued our march. Our long cavalcade proceeded in Indian file over the desolate and monotonous stretches of bilberry-covered open and stunted birch-thicket,—a type of country which, however exhilarating beneath a bright sun, is depressing to a degree under grey skies and driving rain. The wind held steadily from the west, however, and having made sure of the direction in which Sherowmy lay, we left the party, and turning our horses towards the river, devoted the remainder of the day to a search for bears. We had no sooner taken up our positions by the river-side than the wind shifted, fell light, and then shifted again, and all
114 hopes of getting a shot vanished. Of there being bears in the
136 vicinity we had abundant evidence, for the banks of the river were trampled in all directions with their fresh footmarks, among which it was easy to recognise those of an old animal of great size.[1] The

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[1] Some of these Kamschatkan bears are enormous. One skin in my possession measures eight feet three inches in length, in spite of the greater part of the head being wanting.

114 remains of many half-eaten fish lay on the banks. The bears are
136 said by Kittlitz and others only to eat the head and upper part
when the salmon are plentiful, but in almost every case we found that, though the head had been crunched up, it had, together with the tail and intestines, invariably been rejected. We were never fortunate enough to witness these animals fishing, but we were told that they walk slowly into the water where it is about eighteen inches in depth, and facing down stream, stand motionless awaiting their prey. The incautious fish, swimming heedlessly up the river, doubtless mistakes the bear's broad legs for a rock or tree-stump, and those who have once witnessed the almost lightning-like rapidity of a stroke from Bruin's fore-paws will have no difficulty whatever in completing the drama for themselves. The fish is apparently always taken to the bank to be devoured, for even the small ones do not seem to be eaten whole.

552 Sherowmy, or Sherowm,—for the Kamschatkans are fond of
144 clipping the exuberance of their words, and turn Kamakoffskaya
157 into Kamaki,—is a pretty little village of nine houses and forty-
161 three inhabitants, situated on a branch of the Kamschatka River
close to its junction with the latter. To the south lie a few acres
177 of level grass and land enclosed by rough fencing, which give a
361 home-like effect and an air of permanence which is wanting in
most Kamschatkan settlements; while to the west and north flows the river, its banks thickly clothed with trees. The people, although a more or less mixed race, as are those of all the villages we had hitherto visited, nevertheless exhibited strong evidences of their Kamschatdale origin, and the high cheek-bones and general duskiness of complexion were in some cases very noticeable. They were very civil and willing to help us; and later in our journey we learnt to hail the preponderance of the Kamschatdale element with pleasure, for we then felt sure of meeting with none of the surliness of demeanour and barefaced extortion that seemed to be the leading characteristics of the half-breed Siberian Russians.

000 We held a palaver with the Toyune, or head-man of the village, shortly after our arrival, and gave him a letter from the Ispravnik, desiring them to supply us with canoes and men, and to help us to the utmost of their power. He was probably unable to read it, as I afterwards discovered Jacof expounding it to him with great solemnity. I have no doubt, however, that the document lost none of its force in the rendering, for we were shortly afterwards supplied with some more cream in addition to that they had already sent us, and were informed that arrangements should be made for our start upon the morrow, as we desired. Much as we all wished to linger on our way, and to yield to the abundant temptations in the way of sport and natural history that the country offered us, we felt that we could not do so. We knew nothing of the length of the river journey that lay before us, and no one at Sherowmy was able to give us any information on the subject. The signs of approaching winter had already begun to make their appearance. The woods were aglow with autumn colouring; the new snow had already freshly powdered the lower slopes of the mountains, and the clear frosts to which we now woke every morning warned us that we had better not delay. On board the yacht, which was to meet us at the mouth of the river, there was, of course, no means of knowing the date of our arrival, and to keep the ship knocking about a dangerous coast, of which all we knew was that it was unsurveyed and exposed, would be in late September or October a decidedly risky proceeding. We accordingly gave up the plan we had formed of remaining for a short time in the neighbourhood of Sherowmy, and resolved to push on without delay.

CHAPTER VII.

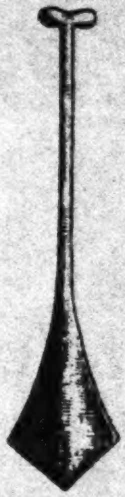
000 ## KAMSCHATKA (*continued*).

We begin the river journey—Our rafts—Bad weather—Werchni Kamschatka—Melcova—A fish curral—Replenish our stores—Melcova church—*Kuklankas* and *parkas*—Extortionate demands of the natives—Curious marl cliffs—Mashura—Rows with the people—Leprosy—Piles of driftwood—Onset of the cold weather—Tschappina—We sight the great volcanoes—Our camp-life—Wild fruits—Renewed quarrels with the natives—An awkward dilemma—We win the game.

157 On the morning of September 1st our horse-boys departed on their
576 return journey to Petropaulovsky. Whether it is owing to the depression peculiar to the country, so enlarged upon by Kittlitz, I cannot say, but there seems to be an utter lack of geniality among these people. They took their wages resignedly, and bade us an unceremonious adieu. Handshaking—the kindly custom in Scandinavia and other nothern countries on the termination of an engagement between master and man—appears to be unknown in Kamschatka. Perhaps after all it was better, for I do not suppose that any of us felt any great degree of affection for Vodki, and at a later period of our journey, fist-shakings would have better expressed our feelings towards the greater proportion of the people with whom we were brought in contact.

Having despatched a letter to the yacht with instructions as to the date of departure for the rendezvous at the mouth of the river, we went down to the stream to make the necessary preparations
322 for our voyage. The only species of boat used in the interior of
501 the country is the dug-out canoe,—a clumsily-shaped craft made

322 from the trunk of the *topoyina* or poplar-tree. They are generally
501 about twenty-five or thirty feet long, by two feet in beam and depth, and are made to a great extent by burning out the interior of the tree-trunk selected, the finishing only being done by means of axes. We were able to procure five of these boats, and by their aid constructed two rafts in the following manner. We lashed three together side by side, with an interval of about one foot between each, taking care to place the weakest in the middle, and on this foundation placed a platform of poles and axe-hewn planks amidships, for a length of twelve or fourteen feet. Over this platform we constructed a rough shelter-hut, with a birch-bark roof sloping away behind, and the back and sides composed of water-proof sheets which could easily be furled or removed when necessary. The other raft, which carried Louis, Cook, and our two hunters, was made in the same way, but without the hut; and owing to its having but two canoes as a foundation, was laden fully up to where its Plimsoll-mark should have been. Our natives sat at the head and stern of each canoe, wielding paddles with a spade-like handle. They were also provided with poles, the use of which, wherever the river was sufficiently shallow, they seemed greatly to prefer. Shortly before noon our preparations were completed, our men waved their adieux to the remaining three-fourths of the inhabitants of Sherowmy, and pushing out into mid-stream, we began our descent of the river.



PADDLE.

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136 Immediately below the settlement the branches of the Kamschatka reunite to form a stream nearly as wide as the Thames at Hampton Court, but scarcely more than a foot or two in depth. The current is rather swift, but without rapids, and the only dangers to be apprehended are the snags beneath the surface of the water. In the upper part of the river there are not many, but, lower down, the tremendous freshets which occur on the

133 136 melting of the snows carry down trees of large size, piling them in enormous masses upon the banks, and depositing the water-logged trunks in the shallower parts of the river, a collision with which would probably result in the sinking of the canoe, from the liability of these craft to split. We progressed with tolerable rapidity, averaging about six versts an hour, rejoicing that stampedes were now things of the past, and that there was at least a possibility of some of our possessions reaching the journey's end unbroken. The river in its earlier course is very winding, and Werchni Kamschatka, the next settlement we expected to reach, although only twelve versts from Sherowmy by land, is more than six times that distance by river. As far as our own feelings were concerned, however, we would willingly have prolonged it yet more, for weather and scenery were alike lovely. The river ran between pebbly banks lined with birches, whose white-barked stems contrasted with the brilliant gold of their foliage. Reach after reach of still water opened out to us its quiet beauty, and here and there a little gap revealed a Hobbema-like scene of sunny distance, whose clearness was unbroken by the waver of a single leaf. Far away in front rose a range of deep blue hills, jagged and peaky, patched only with snow, for their southern slopes had been thawed by the heat of the summer sun. The calm surface of the water was covered by little packs of duck, which rose in long lines as our rafts approached, and the smoke of our guns formed miniature clouds in our wake which hung motionless above the stream until the rounding of a corner hid them from our view. We paddled on silently, our natives talking but little. Now and again the warning *na pravo, na levo* (to the right, to the left) told of the neighbourhood of a snag, or a shallow bank necessitated the use of the poles; but for the most part our progress was one of uninterrupted quiet, and the laziest of Nature's lovers could have asked for nothing better than to sit and be paddled thus for the rest of his natural life.

We saw no four-footed game, with the exception of a couple of

136 yellow foxes (*Vulpes fulvus*), who sat inspecting us curiously as we
floated down, and were none the worse for their temerity. According
to our hunters, these animals are not nearly as common
now as formerly, though from what reason it is difficult to say, as
the skin is of no great value, and they are in consequence not
much hunted. Ducks of the kinds I have already mentioned
were in great numbers, and the Merganser (*M. serrator*) also
seemed fairly abundant. It was of course impossible for us to
reach Werchni Kamschatka before nightfall, so, having made
about forty versts, we landed on one of the broad pebbly beaches,
where the spring freshets had already collected abundant firewood
252 for us, and pitched our camp. The Sherowmy men had a simple
but effective plan of cooking duck that I had never seen before. The
bird is plucked with care, so as to leave the skin unbroken, and
is not drawn. A stick is forced down the throat, and the other
end stuck into the ground close to the fire. The effect produced
when a party of a dozen are thus cooking their suppers is not a
little absurd: it is as if the camp-fire had burst into a perfect
girandole of naked ducks, who fly quacking from it in open-mouthed
alarm.

We had hitherto been favoured with far finer weather than
that usually to be expected during late autumn, but the next day
dawned threateningly, and before long fulfilled its promise to the
utmost. A pall of thick leaden clouds with ragged edges hung
over us, and a steady downpour that showed every prospect of
161 continuance soon commenced. Hour after hour we paddled on
721 through the driving rain, and it was not until after mid-day that
361 we stepped ashore, wet and cold, at the hamlet of Werchni Kamschatka.
R Like most of these places, it is composed of a bare dozen
of huts, with a total population of less than fifty souls; but it
177 enjoys the distinction of being the only settlement on the Kams-
.72 chatka River that is marked on the English chart of the country.
In bygone days it may have merited it, for it was one of the first
ostrogs established by the Russians after their conquest of the

361 peninsula. Now, however, Melcova must be regarded as the
721 chief town of the interior, and its proximity—for it is only fifteen
241 versts distant—must always effectually keep its rival in check.
R We were glad to get warm and partially dried at the house of the
head-man before starting again for this latter place. Some few
177 signs of cultivation were apparent: a few potatoes and turnips,
.72 and a small field of rye, the first cereal we had met with since
our arrival in the country. It looked miserable enough under the
pouring rain, and probably had little if any chance of ripening.

133 Three more hours of rain and paddling brought us to Melcova.
136 It was almost too wet for shooting, but we noticed two or three
226 small parties of the red-necked Phalerope (*L. hyperboreus*) on our
passage. Those that we obtained were in autumn plumage, and were most probably on their way to warmer latitudes. But few duck were to be seen. They had in all probability betaken themselves to the marshes at the onset of the rain, and the river was devoid of life. Before reaching the village an elaborate arrangement of fishing-stakes gave warning of the presence of what in Kamschatka may be termed civilisation. The stakes stretched right across the stream from bank to bank, but we found a small gap at the side sufficient to admit of the passage of a single canoe, and capable of being still further enlarged by pressing down the stakes. The arrangement for taking the fish consisted in the construction of small *currals* at intervals of about fifteen yards. These were long bottle-shaped baskets on the lobster-pot principle, furnished with doors opening at the lower end, by means of which the fish could be secured by gaff or otherwise. We learnt that there were very strict rules with regard to the complete barring of the river at this spot. The inhabitants are obliged to leave a free passage for the fish at the time of their first arrival in the spring, and also on certain days in the week or month at a later period. But for this arrangement the people of Sherowmy and Werchni Kamschatka would of course be without means of subsistence during the winter months.

563 The head-man of the village received us on landing—a person
622 of far higher class than any we had hitherto met, and apparently of unmixed Russian blood. He was the keeper of a small store, and owned a capital little log-built house, which we found uninhabited, and apparently intended for the reception of passing travellers. This he at once placed at our disposal. Tired and wet as we were, the prospect of pitching camp in a sea of mud was not a pleasant one, and breaking through our usual rule, we accepted his offer with pleasure. Before long we were enjoying the unaccustomed luxury of a chair, and were able to skin our birds in tolerable comfort for the first time since leaving Petropaulovsky.

167 Melcova owes its origin to an experiment. With the view of
563 encouraging the cultivation of the land and of making something
241 more of the country than a mere hunting district, where the inhabitants
361 caught enough salmon during the summer to enable them to go after the sables in the winter, a small colony of Russian
R peasants were settled here in 1743, who were to devote themselves
177 entirely to agriculture. The result has been to a certain extent
.24 successful, for the community is a tolerably flourishing one, and with its population of over two hundred, is the most important settlement in Upper Kamschatka. It may, nevertheless, be doubted if the cultivation of the land has contributed to any great extent to its success, for, from the severity and uncertainty of the climate, the prospects of the farmer are as little encouraging here as they are anywhere, and there are probably the full average of sable-hunters in Melcova. But there are small fields and gardens, and a number of cows, which combine to give the place a more home-like and settled aspect than is usual in most Kamschatkan villages.

563 A great portion of our own interest in the place centred, I must confess, in the store. Here, in a space of about twelve feet by eight, we found flour, tea, sugar, candles, axes, and a few odds and ends for sale, but there were no sables or other furs as we had hoped. We had run short both of tea and sugar, and were

glad to be able to get them. The so-called brick-tea is, of course, the only kind in use here, as in other parts of Siberia. It is made in cakes about ten inches by five, and three-quarters of an inch in thickness, squeezed flat by hydraulic pressure, and stamped with large Chinese characters; and were it only of better quality, it would be admirable for rough travel from its portability, and the impossibility of its becoming spoilt by wet. Brick-tea is to a Kamschatkan what coffee is to a Lapp. It is found in the very poorest and most miserable hut, and is regarded as just as much a necessary of life as tobacco. That sugar should also be highly esteemed by the natives is only what might be expected in these latitudes, but its price places it beyond the reach of most. We obtained some at the rate of eighteenpence a pound, but when Dobell visited Kamschatka in 1812 it was sold for as much as five roubles.

Melcova boasts of a resident pope and a church; the latter a log-built edifice, which was moved many years ago from Werchni Kamschatka. It is not ornamental, and is painted red on one side only. The pope received us at the porch, and showed us the interior with evident pleasure; while we, as in duty bound, did our best to assume the necessary air of charmed approval. It must be confessed that it was no easy matter, for the building was completely bare inside, and the walls were covered with English bedroom paper of the commonest kind, set off by an occasional breadth of another pattern, in which pink roses on a bright blue ground displayed themselves in the full atrocity of the early Victorian epoch. Over the altar were a few oil-paintings of saints, one or two of which were passably good.

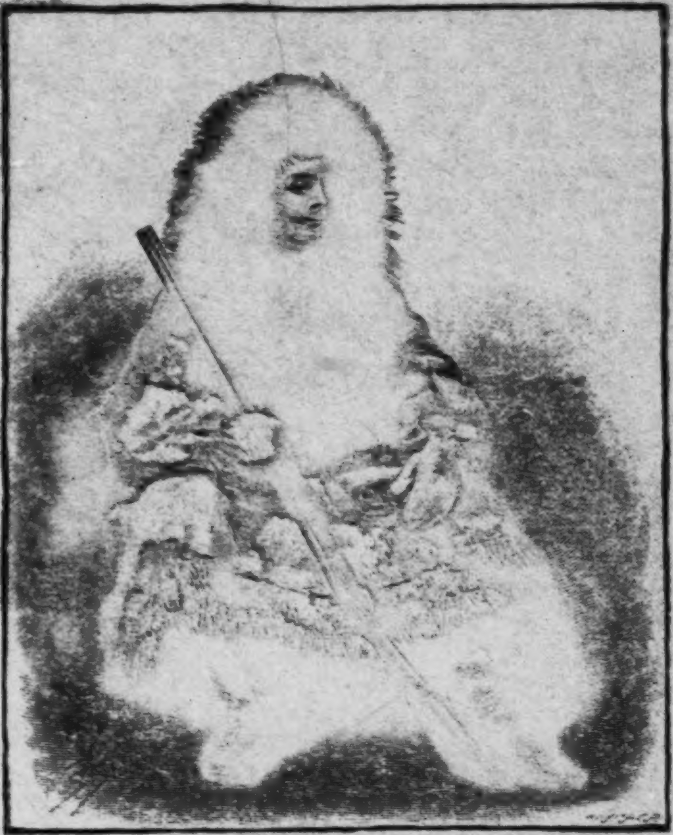
In the same inclosure as the church, but apart from it, as is the usual custom, stands a little square belfry containing seven bells of peculiarly sweet tone. One is inscribed with the date 1761; the others are more recent. The church itself, we were told, was so old as to be beyond repair, and another one was in course of erection close by, the logs of which were of very large size. The

563 whole of the labour and material necessary for its construction was
being gratuitously given by the inhabitants. I am obliged to record
the fact that the building did not appear to be progressing with
very great rapidity.

000 The weather of the previous day showed little signs of improvment.
A biting wind with rain and sleet at intervals made us not
sorry that we had settled to take a Sunday's rest here. Some
fifteen miles or so to the eastward is a fine range of mountains
about five thousand feet in height, which the downpour of the day
before had covered to the lower slopes with fresh snow. Here and
there a passing touch of sunlight fell upon the peaks and threw
them out in bold relief against the leaden sky. But, late and cold
as it was, the fishing had not ceased, and by the river-side they
were cleaning and preparing Kisutchi—the latest salmon that
visits Kamschatkan waters. Numbers of the King Salmon (*O.
orientalis*) hung drying in the balagans; many of very large size.
132 The current of the river is rather swift here and at Werchni, and
133 we learnt that it does not usually freeze completely over until the
end of January. It would seem as if the severity of the frost were
never very great until that month. The snow invariably falls
throughout the country in October, or even earlier, but it is seldom
fit for sledge-travelling until November.

281 While at Melcova we tried to get some of the reindeer-skin
291 dresses of the country, as we had already felt the cold considerably
in European clothes, and knew that at this season the thermometer
would sink steadily from day to day. They had none for sale in
the settlement, and we had to send over to Werchni Kamschatka
for them. These dresses are of two kinds, the *kuklankas* and *parkas*,
and are merely loose sacques composed of pieces of reindeer-skin
beautifully dressed, and sewn together with thread made from the
sinew of the animal, just as are the "karosses" of South Africa.
They are provided with a large bearskin hood, and are put on over
the head without fastening of any kind. The rest of the costume
is composed of a pair of breeches of like nature, and boots almost

281 exactly resembling those in use in Lapland,—made of soft leather
291 throughout, the sole included. The toe is slightly turned up, probably to keep the feet in place when in snow-shoes, and the boot is tightly stuffed with fine hay, which is intended to supply the place of stocking and sole combined. The *kuklanka* is merely a double *parka*, having the fur both outside and inside.



OUR COSTUME ON THE LOWER KAMSCHATKA.

000 On the morning of the 4th September we left Melcova and

000 resumed our journey down the river. We had hitherto only been able to buy one canoe, and in consequence were in need of four others with which to make our rafts. These they refused to sell us, but offered to lend them, together with men to take us on to Mashura, the nearest settlement, for fifty roubles! The silver rouble being nearly three and sixpence, and the distance only sixty versts—rather less than forty miles—we at once refused, regarding the demand merely as one of the common incidents of bargaining, and expecting it very soon to be considerably reduced. We were rather astonished that there was no sign of anything of the kind, and after waiting some time we had ourselves to return to the charge. In vain we threw the Ispravnik at their heads: we had a discussion of an hour and a half's duration, which at last ended in our agreeing to pay forty roubles, but under protest. At the same time we informed them that we should lay the matter before the Ispravnik on our return to Petropaulovsky.

It was two or three hours after sunrise before we got fairly
under way. The weather was gloomy and cold, but with the
exception of one heavy shower, we escaped without much rain.
133 Shortly after leaving Melcova the character of the river scenery
137 changes. For the first time on our journey we noticed the pine
and spruce, and welcomed them with pleasure, as a relief from the
wearisome monotony of poplar, birch, and alder. Here and there
curious mud cliffs bank in the stream; often eighty feet or more
in height, and nearly perpendicular.[1] The men begged that we
would not fire while passing under them, lest a landslip should
occur; and apparently with reason, for the soil appears to be constantly crumbling away, and little cascades of dust poured unbrokenly from the face of the banks as we paddled beneath. In one place we noticed a chalybeate spring welling up close to the water's edge, while others of pure water seemed abundant at the base of these earthy cliffs.

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[1] These banks of reddish marl, known by the name of *yar*, appear to be not uncommon in Siberia. The town of Krasnojarsk on the Yenisei is thus named from their existence in the vicinity.

133 Losing sight of the range near Melcova no more mountains are
361 seen, and Mashura, a village of fourteen houses and eighty-eight
484 inhabitants, has but little to recommend it in the way of scenery.
Excepting at the settlements no boat is ever met with, and voyaging
on the Kamschatka is regarded by the natives as an affair of some
000 moment. Our approach was accordingly heralded by numerous discharges of blank cartridge from the guns of our raftmen, and as we stepped ashore shortly after sunset we found the head-man awaiting us, together with a considerable proportion of the inhabitants. Anxious to prevent a "ring" between them and the men we had brought from Melcova, we approached the subject of canoes for our further journey as quickly as we could. But we had been anticipated, and we began to see that henceforward extortion was to be the order of the day in every case in which we were brought in contact with these people. They refused to sell us canoes, and demanded sixty roubles to take us on a distance of as many versts, —a rate which would have left us with empty pockets before we had got half way down the river. For a small birch-bark jar of milk they asked half a rouble, and charged in like proportion for other articles. In these cases, however, our line of action was simple. We took the things at once, placed them inside the tents, and paid what we considered the proper sum. They refused the money, and when we turned in for the night without having come to any definite settlement for the following day, the relations between us had become considerably strained.

142 Mashura was, in bygone days, one of the largest Kamschatdale
144 settlements in the centre of the peninsula, but smallpox—the
164 disease so fatal on its first introduction among uncivilised nations—
177 broke out in 1767, and ravaged the country to such a frightful
361 extent that it is said to have killed nearly three-quarters of the
natives, and the village has since dwindled down to its present insignificant size. The people were short, but strong-looking men, with scanty beards and straight hair, which was either light or dark, according to the preponderance of Russian or native blood. Most

177 Most 1 of them were clothed in leather breeches and the boots I have
231 already described, with the ordinary loose blue shirt of the Russian
291 peasant, but some had already commenced to wear the *parka*.
These are not all of reindeer, which is not a common animal except among the Koriaks, but are also made of bear and dog fur, although the dogs are not grown for the purpose, as is the case in Lapland.

164 If leprosy be in any way connected with a diet in which fish is
262 one of the chief constituents, as is by some supposed to be the case,
757 in no country in the world should it be more prevalent than in
Kamschatka. Dr. Dybowski had assured me that it was very common, and had shown me photographs in which the expression of the disorder appeared identical with that unfortunately so frequent in Norway. But the only case which came under our notice was at this place, and since the sufferers do not appear to be secluded in any way, it is only fair to conclude that, in the interior of the country at least, the disease cannot be very prevalent. Syphilis is, unhappily, very general, but its effects are now far less terrible than on its first introduction.

133 We paddled merrily down stream in spite of the still unsettled
137 arguments as to the price we were to pay our men. Below
Mashura the pines become more numerous, and the perpendicular mud cliffs are a characteristic feature of the river. Beneath these we found the depth of the stream to be often as much as eighteen or twenty feet, but the mean depth is probably not more than half as great. Huge piles of driftwood block the banks of every low promontory, and testify to the enormous force and volume of the stream upon the breaking up of the ice,—a phenomenon which can dimly be realised from the wonderfully graphic description of Mr. Seebohm in his "Siberia in Asia." Owing to the increased depth of the water, snags became less frequent and navigation easier; but the size of our rafts prevented us from making more than five versts an hour, a rate that our log, frequently heaved and with corrections applied for the current, told us to be fairly constant.

Hitherto we had been able with the greatest ease to shoot as

[i.e., the inhabitants of Mashura--analyst]

Hitherto we had been able with the greatest ease to shoot as
136 many duck as were daily required for our party. At this part of the river, however, there were much fewer, but the birds of prey had considerably increased in numbers. The Ernes (*H. albicilla*) and Hobbies (*H. subbuteo*) were most common, and we procured a fine pair of the former. Neither of these species was shy, but it was only with considerable difficulty that we were able to get within shot of the Ospreys, which we found hawking the river in pairs, but less abundantly. We also shot a specimen of the Red-throated Diver, but our ornithological collection progressed but slowly, the number of species presenting themselves being extremely limited. In spite of the apparent absence of fish—for here but few lay dead upon the banks—the spoor of bear was as plentiful as ever, and an occasional one was more than once visible as we floated down. But unfortunately our journey had now resolved itself into a race against time, and delay was out of the question.

000 We broke camp long before dawn on the morning of the 6th September, and were afloat once more at 6.30 A.M. The morning was fine, but bitterly cold, and as the sun rose, the trees and long dank grass, glittering with the thick hoar frost, presented a rather more wintry scene than we desired. We were glad enough to seize the paddles and get what exercise was possible, and after two or three hours' sharp work we arrived at a bend in the river where a birch-bark hut and two or three canoes appeared to indicate the neighbourhood of a settlement. Not a soul was to be seen, but we learnt that Tschappina—a little hamlet of six houses—lay some five or six versts distant from the river, and at once despatched Afanasi to get what men he could. In three or four hours he returned, accompanied by four natives, but only two canoes were fit for use. The Mashura men, after some talking, offered one of theirs for the modest sum of forty roubles, and after half an hour's wrangling, we eventually became the purchasers for thirty. Its actual market value was less than ten, but we felt that if we could only get two more, we should be entirely independent of the natives, and considered it cheap. A further row then took place with

[i.e., below Mashura--analyst]

000 regard to the price to be paid for the distance we had already gone, and when we eventually got off we discovered that we had lost five hours and a certain amount of temper to boot.

We floated silently down stream for a couple of hours or more, thinking over the discussions that, we knew only too well, would be renewed at the earliest opportunity, when, turning a sudden corner, we found ourselves face to face with a view that banished all thoughts of past and future annoyances in a moment. Before
133 us, eighty miles or more away, stood one of the grandest groups of volcanoes in the known world. Others there are, it is true, that are higher, although in most cases the elevation of the ground from which they take their rise detracts in no little degree from their apparent height. But here, from a base elevated scarce a hundred feet above the sea, a series of cones of the most exquisitely-symmetrical shape rose in heights varying from twelve to seventeen thousand feet. They were three in number. Nearest us was Tolbatchinska, dog-toothed in shape, with its apex on the western side, a long thin puff of white smoke drifting from its shoulder; and beyond, apparently in close proximity to one another, rose the twin peaks of Kojerevska and Kluchefskaya, perfect in their outline, —pyramids of the purest snow, before which one felt how poor was all language to express the sense of their perfect beauty. Snow mountains were no novelty to us. We had seen the Andes and the Alps, and had watched the sun rise on Cotopaxi, on Etna, on Fujiyama, and a dozen other mountains of equal note. But here all questions of comparison would have been a sacrilege, and floating noiseless over the unruffled surface of the river we sat
000 spellbound, drinking in the view. The sun sank slowly as we crept along, and slope and peak, at first a dazzling white, turned slowly to a glowing gold. On either hand the fast-approaching night had changed the glories of the autumn tints to a sombre shade of violet, and behind us the river was a mere streak of light. The bright glow of the fire upon the other raft lit up the bearded faces of our Russian guides around it, and when the daylight had

000 fairly waned, the head of Kluchefskaya stood out a pale greenish white,—a spectral mountain against the fast darkening sky. Come what might, even if we were never again to get a glimpse of them, we had seen the great volcanoes, and we felt that the sight was one that we should not easily forget for many years to come.

Constant practice, together with the "division of labour," had by this time rendered the pitching of our camp an affair of a few minutes only. Pressed as we were for time, we had to continue paddling until it became too dark to see the snags or sunken rocks ahead. The rafts were then run ashore at the nearest beach and the site for the tents selected. In this we had the choice of two evils—the rough ground and rank vegetation of the forest above, and the stony or sandy beach by the water's edge. We always chose the latter, owing to the difficulty of clearing the forest, but it must be confessed that the greater cold and damp of the river-banks almost outweighed their advantages. The cooking of the dinner, which the indefatigable Spiridione had nearly completed on the raft, received its finishing touches at the new fire, and almost before the tents were pitched the usual menu awaited our approval. It was not a varied one certainly, but it was the most luxurious I have ever experienced in camp-life. Soup *à la chasseur*, boiled salmon, stewed capercailzie or grouse, teal *à la* Kamschatdale, bilberry jam, and tea or coffee form a very respectable meal for a traveller whose appetite has been sharpened by the keen air of a northern autumn; and it was but seldom that we failed to do justice to it. And when the journals had been written up and the birds skinned, and we smoked our last pipe at the enormous fire before turning in, we felt that, but for the natives, Kamschatka was as pleasant a country for camping as we had ever experienced.

We were usually afloat again before six o'clock, but our departure was somewhat delayed on the following morning by the unintentional cold bath of one of the members of our party. It is doubtless something of a surprise to the system to find oneself at

000 early dawn, with the thermometer below freezing, struggling in an icy river with all one's furs on, but the unlucky bather was soon ashore, and a sharp rub-down at the camp-fire soon restored both his circulation and his equanimity. The day was once more bright and clear, and the distant peaks looked magnificent in the
133 morning sun. As we drew nearer, the mountains opened out, and the western slopes of Tolbatchinska no longer hiding Kojerevaka, the latter volcano appeared, from this point of view at least, as a perfect cone of regular shape, which half concealed the equally regular and still higher peak of Kluchefskaya, the king of the volcanoes of Kamschatka. Other mountains too had come in view. To the north and west of Kluchi,[1] but in close proximity to it, the smoothly-rounded summit of Uskovska rose above the dark line of forest, and far away to the eastward two isolated and nameless cones of graceful shape appeared on the horizon, which, in spite of their eight or nine thousand feet, are recorded in no map.[2]

133 At this part of the river the conspicuous marl cliffs disappear,
137 and the pines are replaced by aspens, a tree of which we had
361 hitherto seen but little. Landing in the afternoon to take photographs and observations, we came upon quantities of the *cherunka* or wild cherry. The fruit is black, and of the size of a large black currant; very sweet, but with a peculiar sloe-like astringent after-taste. The delicious Scandinavian *moltebær* we did not meet with, but our common raspberry and red currant are in some places plentiful. The latter fruit is, in our English gardens, scarcely worth eating, but in the wild state it is very sweet and palatable.

Eleven hours' steady paddling brought us, at 6 P.M., to three deserted balagans, without fish, and with nothing to indicate the presence of a human being save four canoes hauled high and dry upon the bank. We learnt that Tolbatchik, a village that we

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[1] To the natives, with their love of contractions, the great mountain is thus invariably known.

[2] These we have since named Mount Gordon and Mount Herbert Stewart.

133 361 expected to find here, is not situated on the Kamschatka, but upon a tributary stream which joins the main river some forty versts lower down. There is a short cut overland, however, and we settled to camp and despatch Jacof Ivanovitch to the village at daybreak on the following morning for a fresh relay of men. 000 Close to the camp we shot a large blue hare, the pats of which were very much developed, and clothed with the thickest fur. This, curiously enough, was the only one we met with during the whole journey. The sunset was strikingly beautiful. The eastern sky was a deep purple, and the snowy peaks so bright a rose-colour, that no painter would have dared to transfer them to canvas. But the appearance of the weather was unmistakeable, and we set to work at once to dig deep trenches round the tents in anticipation of the coming rain.

The morning broke as we had foreseen. The wind had shifted to the south, and the rain descended with a steadiness that boded a long continuance. The dull leaden sky reminded us of our native land, and the heavy mist seemed to render even the inside of the tents almost as wet and chilly as the sopping grass without. The natives had retired to their tent, and Verglaski alone, slow and imperturbable as ever, seemed unaffected by the weather. Jacof had started early for Tolbatchik, and there was nothing to be done until his return. We went in search of birds, either for preservation or the pot, but hardly a living creature was to be seen, and a hobby, an owl (*Surnia ulula*), and a small thrush (*T. fuscatus*, Gm.) were the only specimens we obtained. The afternoon, however, was relieved from dulness by our natives, though in a manner that was anything but agreeable, for we found ourselves involved in a renewal of the endless wranglings and discussions of which we had already had more than enough. The Mashura men applied for their money, stating that they wanted to return. Four of them had gone back at Tschappina, but the other four had come on with us, and to these we tendered a sum exactly proportionate to that they had already received for the first part of their journey. This, 000 rounded a corner, and the scene of our late squabbles was lost to sight. In justice to ourselves I should add that we deposited the money actually due to these men with the Ispravnik on our return to Petropaulovsky, but I believe that we should all have been glad to think that they never got it.

We had patched up our canoes as well as we were able before starting, and were glad to find that they made but little water, although the large, and as we had supposed, sound one, proved after all to be quite as leaky as the others. The weather, which had been gloomy and threatening, now showed some signs of improvement, and our spirits rose with the more promising condition of our surroundings. The size of our raft was against fast travelling, but we paddled steadily on, and had made forty versts before
133 camping for the night. At 6 P.M. we passed the mouth of the Tolbatchik River, coming in on the right bank; a tolerably deep stream with a breadth of about thirty yards at its junction with the Kamschatka. We held a consultation as to the possibility of going on all night, but the cold was so great and the passage down the river so risky from the snags, that we eventually decided against it. An accident to our raft in its present state would have been something more than a misfortune; it would have meant little less than absolute disaster.

000 during our river journey nearly spoilt what was otherwise a very pleasant expedition.

We landed for a meridian altitude, and improvised an artificial horizon by means of a bucket of water. The banks were low and flat, and frequently intersected by muddy creeks, while the birches and firs had almost disappeared, giving place to the willow and
136 wild cherry. I have rarely seen more impassable ground than that
137 close to the river.[1] The coarse grass rose high around us, preventing the possibility of seeing anything—a condition which obtains in almost every part of the country; but an additional and far more effectual barrier to our progress existed in the shape of a thick tough brushwood which clothed the irregular ground with a network of small boughs, catching our feet firmly at every step. Later, at Cape Shipunsky on the south-east coast, we found the country even more impracticable. The bears, however, manage by their great weight to force themselves through this thick cover with little apparent difficulty. Just inside the forest, at a distance of six or eight feet from the river-bank, is a firmly-trodden path some two feet in width, made entirely by these animals; and as these paths are to be found without a break on either side of the river in its whole course through the forest country—a distance of about 500 miles—it will be understood why bears' skins do not command any very high price in the peninsula.

The procuring of a sufficient quantity of duck for our daily needs became at this period a rather difficult matter, the main river being deserted by them for smaller streams and marshy pools in its vicinity. Sea-birds became more numerous; a tern (*Sterna longipennis*), two or three phaleropes, or the Red-throated and Black-throated Divers (*C. septentrionalis* and *C. arcticus*), were to be met with from time to time. We also shot a *Podiceps*, which seemed to be identical with our own Red-necked Grebe.[1] On the banks an

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[1] According to Mr. Seebohm, the eastern form of *P. rubricollis* is conspicuous for its larger size, and especially for the greater length and stoutness of the bill; and the measurements of the above-mentioned specimens certainly bore this out.

[the Kamchatka River above Kojerevsky--Analyst]

136 eastern form of the Pied Wagtail (Kittlitz's *Motacilla lugens*) was extremely numerous; the Yellow Wagtail much less so. But of all the land birds the Kamschatkan Marsh Tit (*P. kamschatkensis*) was at this part of the river by far the most abundant. For two or three days we saw them in flocks of from fifty to a couple of hundred individuals, streaming northward along the bank from tree to tree.

133 Shortly after mid-day we passed the mouth of a river joining the Kamschatka on the right bank. The natives knew it as the Kojerevska. It is a stream of some size, being apparently of considerable depth, and having a breadth of forty yards at its junction with the main stream. As far as we could gather, it drains the opposing slopes of the Tolbatchinska and Kojerevska volcanoes.

We reached the little hamlet of Kojerevsky at nightfall. The distance from Tolbatchik, the scene of the last rows we had had with the natives, is only ninety-one versts instead of two hundred, and we might with perfect justice have reduced our payment to half of the sum we had promised. But, to tell the truth, we had become so wearied of the endless wranglings in which we had been involved in all our dealings with these wretched people that we paid them without a word. It was better to let them think that they had deceived us than for them to imagine that we had
262 weakly yielded to what we knew to be an imposition. We were
144 pleased to find that the Kojerevskans exhibited strong evidences of their Kamschatdale descent. We were received by the head-man, a little brown fellow with bright eyes; and under his direction the people did everything in their power to help us, carrying up our baggage, bringing us wood, and altogether showing us an amount of civility that was as new to us as it was agreeable. They provided us with wild cherries, cranberries, potatoes, turnips, milk, cream, and butter, and last, but by no means least, with a loaf of coarse rye bread, which, we heard, had been specially prepared for the Kluchi pope, who had been expected to pay the settlement a visit.

823 133 We felt that we had got among friends once more, and managed by the aid of all these luxuries to pass a very pleasant evening, in spite of the cold. At night the beacon flame of Kluchi, now brilliantly illuminating the clouds of smoke that hung around the crater, now sinking almost to extinction, shone out far above our heads. There was an angry look about the volcano, and we were told that its activity had of late been somewhat increased. The explanation was simple. The Kanuli, or Spirits of the Mountains, whose home is in the bowels of the volcanoes, had merely been more fortunate than usual. It is hardly necessary, in these days of omniscience, to explain that it is to these beings that all volcanic disturbances are due. They go to the sea at night to catch whales, which are their favourite food, and the roasting of several of these animals within the crater is, as may be imagined, an operation which requires the consumption of no inconsiderable amount of fuel.

000 The weather had become steadily colder from day to day, and as we turned out on the morning of the 11th September we regretted that the Spirits of the Mountains had not seen fit to do their cooking in closer proximity to our camp. Our moustaches were frozen to the blankets, and the water in the bucket inside our tent was a sheet of ice. Morning observations and photography are always interesting, but they are certainly best appreciated when the thermometer is well above freezing. The view from our camp was glorious, and the mountains, cloudless from base to summit, towered above us with the startling clearness of outline so
361 characteristic of northern regions. Kojerevsky—a village of ten huts and
133 sixty-three inhabitants—lies at the foot of Uskovska, a mountain of nearly 13,000 feet, whose summit from this aspect presents the appearance of a uniformly rounded dome of snow. It is in reality twenty-three miles off as the crow flies, but the giant scale on which Nature works in these regions belittles space to an extent that is inconceivable, until the hard facts of actual measurement are before one. A little farther to the south and east is Kluchi, whose sharp peak rises to a vertical height of 3¼ miles above the

133 361 river, guarded on the right by Kojerevaka, which is inferior to it in altitude by fifteen hundred feet. To the extreme right lies Tolbatchinska, and above the intervening stretch of flat forest land the solitary peaks of the two isolated volcanoes I have before mentioned are visible some fifty miles away.

We had but little difficulty in getting the canoes requisite for constructing our raft upon somewhat less risky principles than the one that had, thanks to our good fortune, borne us the last seventy miles of our journey in safety. We reverted once more to our old plan of dividing forces, and late in the morning recommenced our voyage amid the firing of many salutes from the guns of the Kojerevskans, to whom we were really sorry to have to 000 bid adieu. At 4 P.M. we reached Uskovska, a hamlet containing

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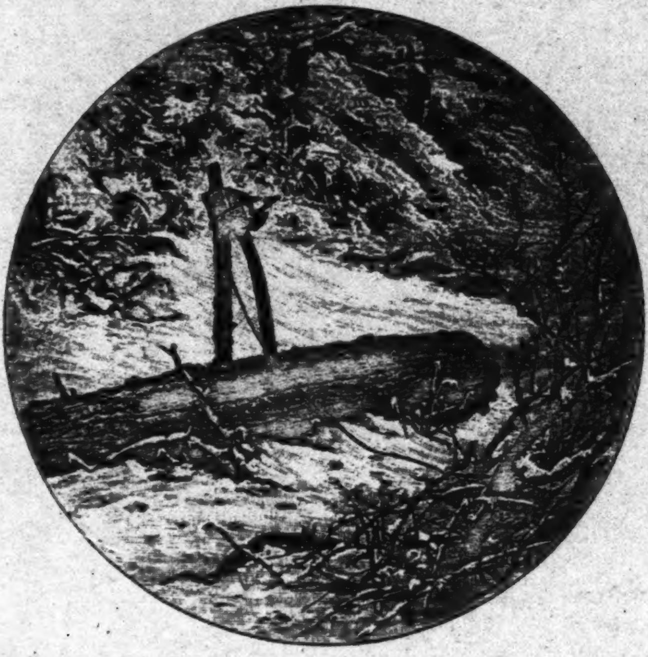

FOX TRAP.

224 361 At 4 P.M. we reached Uakovska, a hamlet containing thirty souls only. Landing to rest, we noticed here, for the first time, a fox trap of simple construction, which is said nevertheless to be very effective. A broad mortice is cut in an ordinary rough log, and in the longitudinal hole thus produced a spring is placed, composed of two pieces of raw hide twisted together, which impels a barbed prong. This is discharged by means of a trigger, to which a string is attached leading across the animal's usual track. Although Kamschatka is a country which would appear to be peculiarly adapted for trapping, it seemed to us that it was not undertaken to anything like the extent that might be expected.

000 We camped eighteen versts below Uakovska, in good spirits at the improved condition of our affairs and our rate of progress down the river. We had need of them, for after dinner, on inspecting our last case of photographic plates, which had been packed with all possible care in blankets, we found that the greater number of them had been broken to atoms. Such are the results of pack-horse travelling! Of the whole lot but two remained, and these, with one or two we had left over from another case, were all we had to last us for the rest of our journey! It was a cruel disappointment. We were in the midst of scenery which for magnificence was almost without parallel, and which we could never have a hope of seeing again. For some days the volcanoes, which at this season of the year are often invisible, had shown themselves without a cloud. And now, just as we were approaching them, and arriving at the very part of our journey of which we most desired to have a record, we were doomed to failure—a failure the harder to be borne from the fact that our limited time precluded any possibility of sketching.

It was blowing hard from the W.S.W. as we embarked at daylight on the following morning, and before long the wind had freshened considerably. The thermometer was not lower than usual, but the keen wind penetrated our garments and froze us to the bone. It was in our favour, and hoisting a portion of one of the tents as a sail, we sped along merrily. Soon, however, it became evident

000 that we could no longer continue our journey. Everything is comparative; and to our craft, with its low free-board and heavy load, the three-inch waves became more formidable than the heavy seas in a gale in "the Bay" appear to an ocean steamer. It would have been too absurd to founder in such a tea-cup storm, so we made for the shore, and set to work to cut down trees till we had to some extent restored the circulation in our limbs. An hour or two later the wind dropped, and we were able to proceed. We noticed the signs of some old forest fires near this spot, but they seem, happily, to be very rare. In Scandinavia, in a journey of the length that ours had been, we should have seen fifty or more. Here the great precautions that are taken against their occurrence are no doubt the chief reasons for their infrequency. Our hunters told us that the sables do not return to these spots for many years after, even if the forest has been but slightly injured by the fire.

361 133 484 Late in the afternoon we passed the hamlet of Kristovsky, or Kristi as it was called by our men, and a few versts farther came upon some people encamped upon the banks. It is curious how little the rivers are used as highways either during the winter or summer. The natives can hardly be said to travel at all, excepting in their winter excursions after sable. This was only the second party we had seen away from the settlements, and we were told that no one had passed down the river from Melcova that year. We shouted greeting as we passed, but there was no time to stop, as we wished to reach Kluchi that night. Our Kojerevsky men worked their paddles with a will, and before long we reached the mouth of the Yelofka River, a large stream, eighty yards or more in width, which joins the Kamschatka on its left bank. It flows due south, draining the western slopes of the great Sevelitch volcano, and is used as a road to Tigil, a settlement on the river of that name in the north-west part of the peninsula, which is, or used to be, a trading station of some importance to which the Koriaks and Tchukchis bring in their furs for sale. 133 The river is ascended by canoes for fifty or sixty miles, the watershed is then crossed by

133 a march of two or three days' duration, and the traveller, striking the upper waters of the Tigil, reaches his destination by canoe.

At or about Kristovsky the Kamschatka, whose direction, roughly speaking, has been due north, bends suddenly to the east, and circles round the base of the stupendous volcanoes that guard its mouth. The aspect of the peaks alters considerably. Were not such a thing almost impossible, one would say that the scenery had increased in its sublime magnificence. Uskovska, Kojerevska, and Kluchi alone are visible, and of the two latter it is hard to say which is the finer. Kluchi is, and had been from every point from which we had hitherto beheld it, a cone of absolutely perfect shape, and Kojerevska is but little less regular in its outline. Now, as we advanced, the base of the latter was hidden in dense cloud, but its summit—a peak of extreme sharpness—stood out bare against the sky, the northern face a vertical wall of black rock on which no snow could rest. The river here is much increased in size, and is from three to four hundred yards broad. The depth is very uncertain, varying from a mere shallow intersected with deeper channels to twenty feet or more.

000 A few versts above the village of Kluchi four canoes pushed out from the banks and joined our party. Fully one-half of their occupants were women, who seemed to use the paddle with as great dexterity as the men. The boats were laden almost to the gunwale with the Kisuchi salmon, almost all of which were in good condition, though some had the peculiar rounded snout developed to a most extraordinary extent. One of the women—a most repulsive-looking creature—was dressed in man's clothes, but another had distinct pretensions to good looks, and ranging her canoe alongside, was soon deep in a flirtation with Afanasi, of whose reputation as a lady-killer we had all heard. The sun was setting as we rounded a corner, and came in sight of the village, its smoke hanging as a blue haze in the still evening air. To our left the Harchinska Mountains, furrowed with deep gorges, looked almost black against the amber sky. The huge cone of Kluchi caught the

000 last rays of the sun and flushed a pale pink, while at the lip of the crater a fleecy puff of smoke hovered for an instant as if in doubt, and then floated out a long thin streamer to the east. Around his shoulders hung a thick belt of cloud, gathering rapidly with the fast-approaching night, and beneath, slope after slope rose steadily up to meet the pyramid above. Kojerevska showed here and there a patch of glistening snow through rifts in the dense veil that hid him from our sight, and on the lake-like surface of the river below our little fleet of boats paddled merrily homewards, to the rough and mournful cadences of a Kamschatkan love-song. Suddenly the flame of the first salute shot out from the other raft, the signal for a general fusillade. It was answered by a flash and a report from the village; and a little later we stepped ashore at Kluchi, and were welcomed heartily by the head-man and a little crowd of the inhabitants.

133 The morning of September 13th broke with hardly a cloud;
137 and the view of the mountains, which now lay nearly due south
361 of us, was so magnificent that I did not hesitate to devote one of
my last plates to it. We crossed the river in a dug-out, and
landed on a sand-bank near the opposite side. The stream is here
six hundred yards in breadth, and forms a fitting foreground to the
picture. Behind the village, whose weather-worn huts line the
banks for nearly a quarter of a mile,—for Kluchi may be regarded
almost as a city in this part of the world,—the even slopes of
ruddy vegetation rise smoothly upwards, till, at the height of two
133 or three thousand feet, the snow is reached. The outline of the
mighty volcano was as perfect here as before, and its exquisitely
graceful slope as unbroken. Near the summit, on the side immediately facing us, a deep furrow, as yet untouched by the rays of the morning sun, showed the remains of some past eruption—a huge scar which the snows of many winters had done their best to obliterate. From the crater light puffs of smoke drifted slowly away to the east, far whiter than the snow which lay below, for on all sides, and especially near the summit, a sprinkling of ashes had

dulled its purity almost to a grey. The rounded half-dome of Uskovska to the west showed a vast field of unbroken snow, and on the side towards Kluchefskaya appeared to have been completely blown away by some great eruption in past years, leaving a huge open crater, the western walls of which alone were standing. The upper part of these, which was all that we were able to see, seemed to be almost vertical upon the inner face. Between the two mountains was a lesser cone, which, like Uskovska, appeared extinct. To us it was known as Little Kluchi, though whether we obtained this name from the natives or not I do not now remember.

The opportunity was an excellent one for taking further observations on the heights, the river forming a good base. We accordingly took advantage of it; and from the results of this and other work the following may be given as fairly accurate altitudes for the four chief volcanoes lying to the south of the lower part of the Kamschatka River:—

Kluchefskaya	16,988 feet.
Uskovska	12,508 „
Kojerevska	15,400 „
Tolbatchinska	11,700 „

Mount Gordon and Mount Herbert Stewart—the two volcanic cones lying to the south-east, to which I have alluded on a previous page—are probably both about 8000 feet in height.

It was late when we returned to breakfast, and found a visitor awaiting us. He was a poor old fellow nearly seventy years of age, who had spent three-and-thirty years of his life in this one spot, acting as a sort of doctor. What diplomas, if any, he possessed I do not know, but he seemed to have had sufficient ability at some remote epoch of his existence to have forgotten something. Half in dog-Latin, with a word or two of English, and half through Jacof and Afanasi, he gave us some few scraps of information. It seemed that three years previously—in 1879—

133 an eruption of Kluchi had occurred. There had been no previous warnings, although the mountain is always more or less in a state of activity, but on the morning of August 14th, dense clouds of smoke appeared above the crater, and at mid-day the sky was as dark as night. Before long ashes began falling, and in a few hours the ground was covered with them to the depth of three inches. There was no earthquake, but, on the following morning, a small stream of lava poured from the lip of the crater on the north side. It descended but a short distance, however, and, shortly after, the mountain returned to its usual state of threatening quiescence. With this exception there have been no eruptions within the memory of man, or at least none of any magnitude. A few ashes often fall, and had done so not long before our visit, but the recent falls of snow had done much to hide them.

Kluchi appears to have been still more active in the middle of the last century. Krasheninikov, in the work I have mentioned, says that "it throws out ashes twice or thrice yearly, and sometimes in such quantities, that for 300 versts around the earth is covered with them to the depth of a vershoke (nearly two inches). From the year 1727 to 1731 the inhabitants observed that it burnt almost without interruption, but they were not under such apprehensions as in the last conflagration in the year 1737. This terrible conflagration began the 25th of September, and lasted one week with such violence, that to the people who were fishing at sea near the mountain it appeared one red-hot rock, and the flames which burst through several openings sometimes showed like rivers of fire with a shocking noise." On the 6th of October there was an earthquake of tremendous violence in the Avatcha district and the southern point of Kamschatka; regions which, it should be observed, lie in a direct line between Kluchi and the volcanic chain of the Kuril Islands. An enormous tidal wave occurred, "overflowing the shore 200 feet high," and killing many of the inhabitants; but the country in the immediate neighbourhood of the volcano did not appear to suffer much, although a violent

133 earthquake was experienced at Nischni Kamschatka on the 23d of the same month.

In 1762 and 1767 outbursts again occurred, though of very much less severity, but subsequent to that time no accounts of other eruptions have, as far as I am aware, been published, with the exception of that of Professor Adolph Erman, who, in 1829, found the peak "in picturesque and sublime activity, and approached the burning lava, which poured forth a continuous stream," till he reached the height of 8000 feet above the sea.[1]

Upon the northern side of the Kamschatka River, 59 miles N.E. by N. of Kluchefskaya, rises the irregular mass of Sevelitch, of which we had hitherto seen but little. Its height is probably between ten and eleven thousand feet, but we were not able to take any measurements to correct this estimate. It is highest and most conical at its eastern side, and at the time of our visit was sending forth considerable volumes of smoke, which appeared to come from a crater low down on the south-west aspect, but owing to the extreme irregularity of the mountain, it was difficult to ascertain its exact position. Nothing indeed can be more striking than the difference between this volcano and Kluchi. The latter, with its wonderful steepness of slope and its unbrokenly conical shape, is probably one of the best instances that could be given of a mountain that owes its entire height and form to the slow piling up of the ashes and lava ejected from its crater. But in Sevelitch it is evident that the method of formation has been very dissimilar, and not of gradual occurrence, excepting as regards the secondary craters that have formed on the original mass. Hr. Erman, who passed several days on the mountain and the plains below, regarded it as having been forced from beneath the surface at a single eruption, since its bulk was composed of crystalline rock "resembling lava as little as the granitic rocks of the Alps." It would seem as if some giant power had upheaved the thin crust of the

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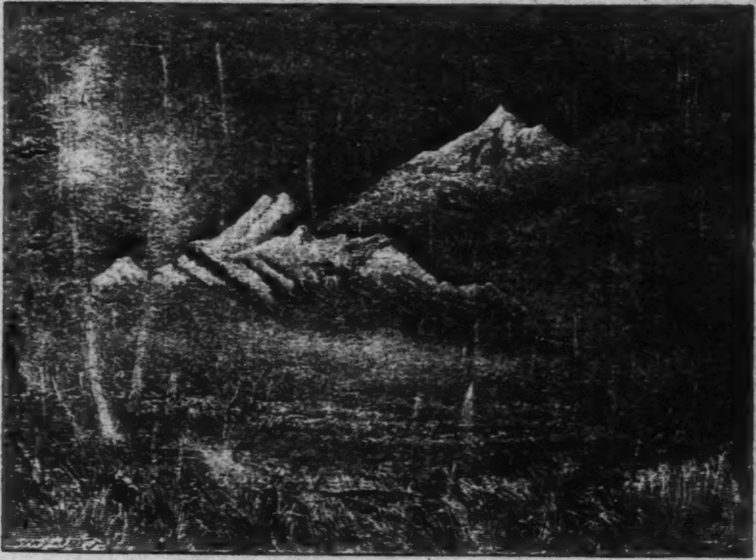
[1] "Journal Roy. Geogr. Soc.," vol. ix. p. 509. In the map accompanying this letter, Uskovska is placed some miles to the south of its real position.

133 earth's surface, and that through the openings thus formed the liquid rock had poured, retaining the uptilted fragments in their new position.



SEVELITCH VOLCANO, FROM THE SOUTH.

About nine months after our departure from Kamschatka a series of eruptions appear to have taken place, which in grandeur must have rivalled those described by Krasheninikov in 1737. Of these no particulars seem ever to have been published, for two years later the very fact of their occurrence was unknown both to the Royal and Royal Geographical Societies. But, from the fact of their having been synchronous with the terrible catastrophe at Krakatau, they present features of such interest that I here quote the cutting of the "Japan Gazette," to which I am indebted for the only information I can obtain upon the subject:—

"THE JAVA ERUPTIONS.—We are indebted to Mr. T. R. Green, who has just returned from a prolonged journey in Northern Asia, for some highly

133 interesting information respecting volcanic disturbances in that region. The particulars given, taken in connection with the recent volcanic eruptions in Java, seem to indicate that the active agency extended over an immense area. The disturbance of Mount Krakatau began early in August last, culminating on the 26th. At the beginning of July a cone, from 8000 to 10,000 feet high by estimation, not marked on the chart, but situate near the Kamschatka River, supposed to be inactive if not entirely extinct, suddenly split in two, emitting immense quantities of lava, which poured down its slopes. This phenomenon was not, however, accompanied by any very great local disturbance. Mount Siveluch (of Keith Johnston's map), the highest peak of the Kamschatkan range, 17,000 feet high, was in active eruption throughout the whole month of July, the pillar of flame in calm weather being distinctly visible at distances of from 200 to 250 miles; giving, after allowance for refraction, an altitude above the summit of the cone of 8000 to 10,000 feet. When the air was still, smoke, steam, etc., rose vertically to an elevation of 15,000 feet, where, meeting with a northerly air current, it abruptly took, at right angles, a southerly direction in a thin direct line. Captain Hubbard, of the M.B.S.S. *Toyoshimamaru*, recently described an eruption which took place at Shibotaru, one of the Kuriles, in the early part of June last. A copy of his letter addressed to Professor John Milne was, by the kindness of the latter, published in the 'Japan Gazette' of 30th June. Mr. Green further states that in April last the ice in the neighbourhood of the Kuriles was discoloured with volcanic ashes for miles in every direction, indicative of eruptions of unusual violence, probably in the north, but of which we have no note. Mr. Green was enabled to make some very interesting observations on cloud formations in the vicinity of the Kronotsky Peak. He describes this as, perhaps, the most perfect cone in the world, because it tapers to a fine point, and is of greater elevation than Fujiyama. At 2 A.M. to sunrise it would show perfectly clear and distinct from the sea like an unplumed cocked-hat. As the sun rose the snow would soften, evaporation no doubt begin, and mists would slowly gather around the summit, giving the mountain the appearance of a gigantic plumed field-marshal's cocked-hat. At daylight on the next morning there was not a vestige of the plume, but the process of its formation proceeded with unvarying regularity. This information will probably attract the attention of the Seismological Society. There certainly now seems an opportunity rarely offering for collecting and digesting the data respecting recent volcanic disturbances which should be availed of."[1]

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[1] The above paragraph needs explanation. What the "cone not marked on the charts, but situated near the Kamschatka River" may be it is impossible to say, but

000 Kluchefskaya and his fellows have led me into a longer digression than I had anticipated, and I must return to the poor old doctor who, had we been better acquainted with his language, would doubtless have proved an interesting companion. He told us that we were the first travellers he had ever known to come down the Kamschatka River. We appeared to be a source of almost childish delight to him, and his pleasure was still further increased by discovering a professional brother. He was becoming blind he thought, and asked me to look at his eyes, which showed signs of advancing cataract. Operation would have been inadvisable at the stage they were in, and I told him that I feared I could do nothing for him. He kissed my hand and raised it to his forehead, saying that it was of no consequence, and that he loved all doctors, no matter of what nationality. There is a law against selling liquor in the interior of the country, and his eye glistened half with sorrow, half at the aspect of a bottle of Hennessey that stood at hand. We offered him a glass, and it disappeared as if by magic, and as he made his bow and *do svidania*, he absently helped himself to another bumper. He had asked me to go with him to his house, as he had a present for me. On arriving we found his granddaughter, a pretty little child of five or six, playing with a young blue hare which lolloped up in a most confiding way to have its ears scratched. This was the present, but it was evidently such a pet of the little girl that it would have been a crime to have taken it. The old gentleman, however, apparently wished to make some return for a lancet I had given him, and was rather disappointed at my refusal until he suddenly bethought himself of a skull of a Kamschatdale, which he had found laid bare by a

by "Mount Siveluch" there is, I think, but little doubt that Kluchefskaya and not Sevelitch is meant. It is evident that Mr. Green did not himself visit the neighbourhood of the great volcanoes, or he would not have described the Kronotsky Peak as the most perfect cone in the world. The height of this mountain, which lies immediately to the east of the lake of the same name, is given by Findlay as 10,610 feet, while that of Fujiyama has been variously estimated at from 12,234 to 12,365 feet.

000 flood at one of their ancient burial-places,—a treasure that I joyfully accepted.[1]

We had taken up our quarters at the house of the head-man,
and on my return thither I found that the pope had arrived to
pay us a visit. His appearance was not prepossessing, and un-
kempt hair, a very fully-developed squint, and a total absence of
conversation rendered him decidedly uninteresting as a companion.
But he brought us two remarkably fine cabbages as a present, for
563 which unaccustomed luxury we felt very grateful. We learnt
793 that there were only nine priests or popes in the whole of
R Kamschatka. Like the doctors, they are paid by the Government,
177 but they also receive tithes in kind from the people. They come
.79 for the most part from Siberia, and socially rank little, if at all,
above the peasantry. This gentleman, for example, had married
the sister of one of the horse-boys we had brought with us from
Petropaulovsky to Sherowmy, who had been sable-hunting with
Jacof Ivanovitch at the Kronotsky Lake during the preceding
000 winter. We called on her to thank her for the present, and found
her a homely litttle woman with a much larger fund of conversation
than her husband. On leaving the house a grey-bearded old
man rushed out upon me, seized and kissed my hand, em-
braced me, patted me on the back, and poured out a torrent
of unintelligibility which led me to the extremely English
conclusion that he was drunk. I had wronged him. Afanasi
was at hand, and gave me a *précis* rendering of his speech.
He was merely expressing his delight at meeting with a Euro-
pean traveller!

The doctor had arrived to pay us another farewell visit when I again reached our house. We had many attractions for him; some of them in bottle. Poor old fellow; his sorrow at parting with us was too much for him, and when we turned round and discovered the Hennessey at the lowest ebb, it gave us almost pain to have to sign to Louis to remove it.

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[1] *Vide* "Journal Anthrop. Inst.," Vol. xvi., No. 1, p. 21.

563 Our original intention had been to leave Kluchi in the forenoon, but many things conspired to prevent it. We had bought some of the little birch-bark barrels that they make so cleverly throughout the country, and there was a great discussion as to whether we had paid for them or not,—easy to be explained by the fact that the inhabitants of the village are the descendants of Siberian Russians brought from the River Lena, and settled here about the year 1735. Wearied with the constant recurrence of these impositions, I wandered out at the back of the village to inspect the fields, which are of larger extent here than in any other place we had yet visited. Rye is cultivated, though apparently not to any very great extent, although the valley of the Kamschatka is said to be the only place where there is any chance of its ripening. It is sown in the middle of May, and the harvest, when there is one, is at the middle or end of August. Potatoes and turnips were grown in some abundance, but there was little else in the way of cultivation except a few poor attempts at garden produce. The catholic tastes of the sledge-dogs prevent the inhabitants from keeping the smaller domestic animals, but cows are numerous, and almost every house had poles placed around the front to keep off these animals, which are permitted to wander about at will.

000 The discussion on the birch-bark barrels had subsided on my return to the house, but we found that our landlord had inserted the pope's cabbages in the bill—or what would have been the bill did such things exist in the country—and more difficulties arose before we finally got afloat. At the last moment the doctor again appeared, with two boxes and a loose razor which he begged us to take to his son in Petropaulovsky. In his hand he bore the Kamschatdale skull, reverently tied up in an old handkerchief. We paid our landlord, and included the pope's cabbages; we paid twice for our birch-bark barrels; we slung up the skull at the back of our hut; and bidding *do suidania* to the united population of Kluchi, who were drawn up on the bank to watch our departure,

000 we paddled out into the current, and in another ten minutes the
village was lost to view.

114 In Findlay's "North Pacific Directory" it is stated, though upon
135 what authority is not clear, that the Kamschatka River "is said to
136 be capable of admitting vessels of 100 tons about one hundred and
fifty miles up the stream." This, however, is not correct, or at any rate is very misleading, for the river is beset throughout with sand-banks which in many places apparently lie completely across the stream. Thus, opposite Kluchi village there was only an average of seven feet of water, while both above and below we got depths of twenty or thirty feet and more. The sand-banks also are very unexpectedly placed, and the navigation of the stream by a large vessel, even if possible, could only be accomplished by the aid of an elaborate system of buoys, which, I need hardly say, is not likely to be instituted for many a year to come. From some versts above Kluchi to the mouth of the river, except at the Tchoaki or narrows, to which I shall have occasion to refer presently, many islands are formed by the bifurcation of the stream, some of them of large size, and the river increases considerably in breadth. Opposite the village it is said never to freeze entirely over, a fact the people attribute to the existence of hot springs in the river bed. They also told us that salmon remain here throughout the winter, though not in any great numbers.

Among these islands there appeared to be more duck than we had been lately accustomed to see in the lower part of the river, and we here obtained the Shoveller (*S. clypeata*) for the first time. Landing to replenish the larder at some small lakes towards the hour of sunset, we remarked both snipe and wild geese, neither of
which we had previously met with, but it was too dark to dis-
000 tinguish the species. Verglaski followed us on occasions such as
these with the stolid expression and steady gait he always affected. Nothing short of a bear, I believe, ever roused him to any less dignified pace than a walk, and as he slowly followed us, I had a lurking suspicion that he regarded our occupation as a rather

000 childish one. I had too much belief in his moral character to attempt to account for his peculiarities by any such physical reasons as "the rheumatics"—a cause that one of us profanely suggested. As a retriever he was inimitable. We had shot a duck that fell far out into the shallow lake, and while looking at it, and calculating the possibilities of its drifting ashore, Verglaski came up and realised the situation. He glanced at us in a way that said plainly, "This is not my business, but if you will wait here, I will see if I can get it out for you," and proceeded to do so with a three-yards-a-minute pace, and a concentration of purpose that was irresistibly ridiculous. Poor old dog; it was the last service he ever rendered us.

We had contemplated sleeping on the rafts, and continuing our journey through the night, as the river is at this part free from dangers, but as it would have made it impossible for us to go on with our observations, we eventually decided not to do so. We accordingly paddled on until it was too dark to see, and making the rafts fast to the bank, slept as well as we could at the bottom of the canoes, so as to be in readiness for starting at dawn upon the morrow. In the way of saving time the experiment was successful, and we were off again at 4. 45 A.M., reaching the hamlet of Kamakoffskaya after three hours' steady paddling. Just before arriving we awoke to the distressing fact that Verglaski was not with us, and as no one had seen him since leaving the camp of the previous night, there was but little doubt that he had been left behind. Jacof at once borrowed a canoe and went in search of him, hoping to catch us up before nightfall. Meanwhile we had breakfast and inspected the village, which, in spite of its imposing name, is a miserable, bleak-looking place, with a population of barely fifty. Perhaps it is with some latent feeling of modesty that the inhabitants have shortened Kamakoffskaya to Kamaki. The day was wretchedly cold and gloomy, and the aspect of two half-starved Kamschatdale children, clad in a tattered rag of furs, who sat shivering on a rotten old canoe which lay half-buried in the mud,

133 did not serve in any way to render it less depressing. The village
137 appeared nearly deserted, and as there was nothing to detain us we resumed our journey without loss of time. Before noon we arrived at the Tchoaki (lit. cheeks). These are narrows about seven miles in length where the river passes through a range of hills from two to three thousand feet in height. Both entrance and exit are very sharply defined, and the stream, which above and below is about eight or nine hundred yards broad, is here narrowed to between three and four hundred. The scenery is decidedly picturesque after the monotonous miles of willow-lined banks that weary the traveller's eye in the lower part of the Kamschatka; and we were reminded somewhat of the Iron Gates on the Danube, which geographically—I do not say geologically—the Tchoaki closely resemble. But the former are on a grander scale, and the river here, in spite of its contracted width, exhibits none of the tumultuous rush of water which makes the passage of the Iron Gates so difficult to a Danube steamer.

000 In the Tchoaki we met two or three canoes coming up from Nischni Kamschatka, and learnt from them that a schooner, painted white, and with a steam launch, was lying at Ust Kamschatka—the settlement at the mouth of the river. This was a piece of information which astonished us considerably. That there should be a ship of any kind there other than the *Marchesa* was most improbable, for, as they told us, she was the first vessel that had visited the river for three years. More improbable still was it that she should be a stranger when the fact of her being painted white was taken into consideration; while the existence of a steam launch seemed finally to put the matter beyond a doubt. But on the other hand, the fact that she was said to have arrived many days before was greatly against it, and as the bar was very shallow, it seemed hardly likely that the *Marchesa*, with her draught of fifteen feet, would be able to cross it. The natives could not give us any further information, as they had not seen the vessel, and we were left in a state of doubt which no amount of discussion helped to enlighten.

161 Emerging from the eastern entrance of the narrows we found
133 ourselves passing through a flat, uninteresting plain which extended
361 as far as the sea. Here the scenery is scarcely more interesting than that at the mouth of the Thames. A cold wind swept over the dreary reaches of the river, and behind us an ink-black sky gave warning of approaching bad weather. At 4. P.M. we passed Nischni or Lower Kamschatka, once the capital of the peninsula, a village of some importance with twenty houses and a church, and a population of 150. It lies a little way off the main river upon a smaller stream, and just opposite, upon the other bank of the Kamschatka, the Raduga, a river about forty yards wide at its mouth, flows in
000 from the south. A canoe shot out to intercept us as we passed, bringing a letter for Petropaulovsky from the Kluchi pope, who had left that village just before us on the preceding day, and shortly afterwards we saw another boat paddling hard after us. We stopped to let it approach, and soon recognised Jacof, whose gloomy face told us that Verglaski had not been found. He had apparently gone down the river for some distance, and had then turned back and proceeded towards Kluchi. Here the track had become obliterated, and Jacof had been obliged to give up the search. Poor old Verglaski; his quiet methodical ways had endeared him to all of us, and Jacof was much distressed at his loss. In the summer he would have had no difficulty in finding enough to subsist on, but at this season hardly any fish were left, and the settlements being so far apart, and upon the other side of the river, it was more than doubtful if he would ever have a chance of reaching one of them.

Paddles were once more resumed, and we were discussing the advisability of proceeding to the mouth of the river without stopping, when we perceived the smoke of a steam launch in the distance. By our glasses we soon made her out to be a stranger, and all doubts as to the arrival of the *Marchesa* were thus at an end. She proved to be the launch of the walrus-schooner *Nemo*, bound to Nischni Kamschatka. She had on board the first officer—

000 a Swede—an agent of Mr. Phillippeus the fur-trader, and a crew of four Japanese. They told us that nothing had been seen of the

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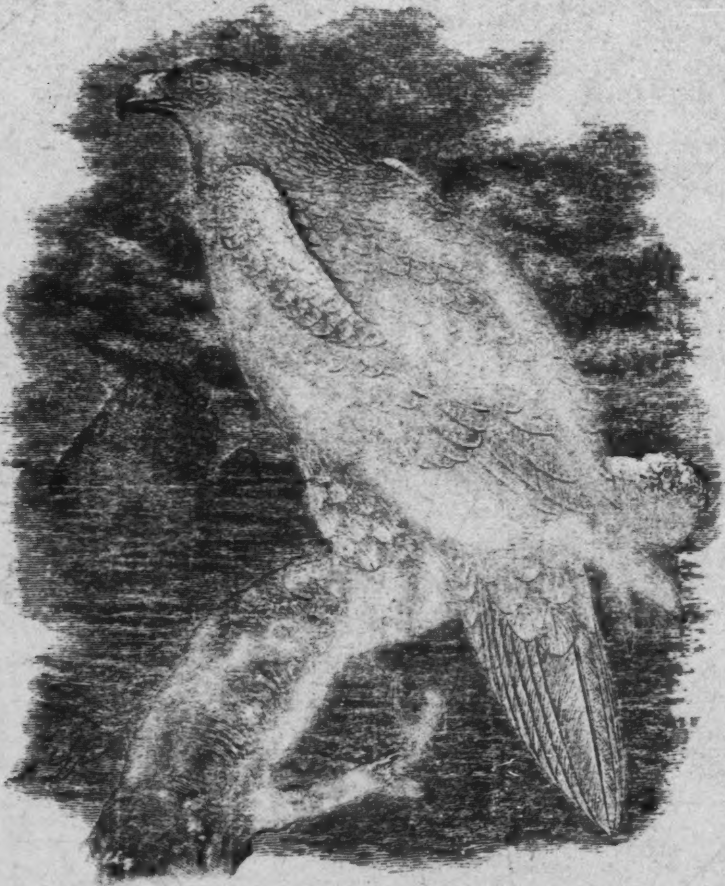

PALLAS'S EAGLE. (*Thalassaëtus pelagicus.*)

000 yacht, and could give us no news of the civilised world, having been for some time lying in the river; so, after wishing them *bon voyage*, we continued our journey.

136 Since leaving Kluchi we had spent a good deal of time in trying to obtain a specimen of Pallas's Northern Sea Eagle (*Thalassaëtus pelagicus*)—a species which, at this part of the river, is by no means uncommon. It is a magnificent bird, and is especially conspicuous from the large white shoulder-patches and tail, but owing to its shyness it is extremely difficult to approach. We were, unfortunately, not provided with a rook rifle, and the few long shots we obtained were unsuccessful. Once only did we get a bird fairly within shot, and the two barrels of No. 2 that he received at a distance of thirty yards seemed to have no effect whatever upon him. This eagle appears to be chiefly confined to the lower part of the Kamschatka River, for we did not meet with it before reaching the neighbourhood of the great volcanoes.

226 252 262 The natives are prevented by law from barring the river in the lower part of its course, and here the salmon are taken chiefly with seine and drift nets. The V-shaped curral-trap of stakes, with baskets on the lobster-pot principle, is also frequently seen; a system which, as I have already stated, is used to bar the river right across at Melcova. The fat of the Kisuchi salmon is regarded as a great delicacy, and is prepared in considerable quantities at this season. A canoe is filled with water, and a number of the fish placed in it. Into this large red-hot stones are dropped, thus boiling the contents, which are meanwhile constantly stirred. The fat is then removed as it rises to the surface.

133 224 The low and muddy shores of the river in this part of its course are in many places intersected with small creeks, at the mouths of which two tall poles may often be noticed. These are used for taking ducks at flight time, by a plan which is not uncommon in other parts of the world. A fine net is hung between the two poles, which the hunter lets fall as the birds fly against it. By this means we were told that large numbers are often caught.

000 We woke on the morning of September 15th to a most miser-

WE WOKE ON THE MORNING OF SEPTEMBER 15TH TO A MOST MISERable day. We had not dug the trenches round our camp unnecessarily; the rain was coming down in torrents with a bitter wind, and we deferred our start till nearly noon. After four hours' paddling, the river, which here averages from twelve to fourteen hundred yards in breadth, widens still further opposite to the entrance of the arm leading to the Nerpitchi Lake, and sweeps round sharply to the south. Just beyond lies the village of Ust Kamschatka, in the dreariest situation it is possible to conceive; and here, cold and tired, we pulled up at 5 P.M. and established ourselves in a comfortable little hut belonging to Mr. Phillippeus, the fur-trader. Our journey was practically at an end, for we were but four miles distant from the bar at the mouth of the river.

A small look-out tower is built a little to the south of the village, and we at once ascended it to see if there were any signs of the *Marchesa*. Nothing was to be seen at first, but before long we made her out approaching from the south; and thus, after an absence of a month, we had hit off the time of meeting with an exactness as curious as it was fortunate. We were anxious to get off without delay, and the captain of the *Nemo*, with whom we had made acquaintance, offered to take us. We were soon afloat in his whaler, which was manned by a Japanese crew, and with the oars double-banked, we got over the water at a pace that was somewhat different to that to which we had been accustomed on the rafts. As we neared the river's mouth the thunder of the surf was not reassuring, and we landed to reconnoitre on the left bank, where the river, making a sharp turn before debouching into the sea, runs close to and parallel with the beach. Our men, who had preceded us with the baggage, had made a large fire of driftwood, of which we were glad enough to take advantage, for our teeth were chattering with the cold, and the rain had recommenced. But what we could see of the bar through the darkness was not such as to induce us willingly to attempt it, and we at once decided to return.

000 The captain of the *Nemo*, who was a Swede, and spoke English with perfect fluency, enlivened our row home with his accounts of Saghalin, from which island he had just come. It is now a Russian penal settlement, which is only used for criminals of the worst kind. The discipline adopted, according to his account, was of extreme severity, and many of the prisoners preferred to take their chance of escape, and the almost certain risk of death by starvation in the bush, rather than endure it. In one case he mentioned, two of these unfortunate wretches escaped. One was caught almost immediately, and the other returned of his own accord at the end of some days, nearly dead from starvation. He was fed up until he recovered, and 100 lashes were then administered every day until one of the men died.

361 In Ust Kamschatka, it is hardly necessary to say, there are
neither gas lamps nor pavements,[1] and the state of the paths about
the settlement—if paths indeed they can be called—is indescrib-
000 able at this season. The captain, who was as good an amateur
doctor as he was a Samaritan, had asked me to come and see a sick
woman he had been looking after, and we accordingly started at
once in search of the hut. It was by no means easy to find it,
and we stumbled about over stones and through swamps for some
time in vain. In one of the latter my companion lost his boot,
and though we expended all our matches in hunting for it, we
never saw it again, and he had to see his patient in a condition
that was, to say the least of it, unprofessional.

We had been bidden to a feast in the evening. To have one ship in the port was rare enough, but the presence of two was so unprecedented that it was felt that something must be done to commemorate it. A ball was accordingly resolved on. The Swedes sent various intoxicating drinks, as became their nation; and the supper-table groaned with Kamschatkan delicacies—cranberries, brick-tea, and cold ducks. The ballroom was not lofty, and the

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[1] Perhaps I may be wrong. I was once asked by a lady, in all seriousness, if the hotels in New Guinea were tolerably good!

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attempted it on the previous night would have been foolhardy in the extreme. 1At ordinary high tides it appears that there is between ten and eleven feet only in the deepest part, and R—— told us that he had had a narrow escape in getting the *Nemo*, which had a draught of ten feet six inches, into the river. She had bumped heavily once or twice. The entrance shifts constantly, and in bad or indifferent weather the bar is doubtless a very dangerous one. We arrived at the best time of the tide,[1] and were fortunate enough to get over the three big waves without even a wetting. A few minutes later we boarded the *Marchesa*, after an absence of exactly a month. We found all well, and the day passed quickly in chatting over our various adventures. The Swedes bade us adieu towards evening, and the sun was setting in a blaze of gold behind the giant pyramids of Kluchi and Kojerevska as we fired a farewell gun and stood away for Bering Island.[2]

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[1] It appears that there is only one tide here in the twenty-four hours.

[2] I have adopted this, the correct orthography of the celebrated navigator's name, instead of the more usual Behring, a piece of bad spelling which, I believe, we originally borrowed from the Germans.

[at the mouth of the Kamchatka River--analyst]

CHAPTER X.

KAMSCHATKA.

000 **Cape Klin—Walrus—Permanence of snow at the sea-level—Betchevinskaya Bay—Hunting *Ovis nivicola*—Impassability of the bush—A magnificent bag—Description and measurements of the Kamschatkan Bighorn—Natural breakwaters—Seals and bears—Lost in the bush—Return to Petropaulovsky—Unveiling of the monument to the affair of 1854—Ship's pets—Leave Avatcha Bay for the south coast—An otter-hunters' village—Method of killing the sea-otter—The peoples of the peninsula—Lamuts in Kamschatka—We leave for Japan—South-easterly gale—Encounter a typhoon—Loss of Le Gonidec—Another gale—Repair damages in Yokohama.**

133 THE eastern shores of the peninsula of Kamschatka are broken by three well-marked promontories:—Capes Kamschatka, Kronotsky, and Shipunsky; and it was for the latter—the southernmost—that we shaped our course. Our friend R——, the captain of the schooner *Nemo*, had recommended this part of the coast as being the best ground for wild sheep and walrus, and though he had himself hunted it on his voyage to the mouth of the Kamschatka River, we hoped that a sufficient time had elapsed for the animals to have returned to their old quarters. Nearing the land a little to the north of Cape Shipunsky, it soon became evident that the outline of the chart of this part of the coast had been traced according to the fancy of the cartographer. Instead of a nearly straight shore devoid of dangers, we found ourselves at the entrance of a fine bay nearly two miles in depth, running in a south-westerly direction. The scenery was wild and lonely-looking to a degree, but the jagged precipices and rocky islets of which it was in great part

133 composed were less pleasing to a sailor's than an artist's eye; /and it was with a certain relief that, on the return of the lifeboat we had sent to coast the shores of the bay, we learnt that no trace of walrus was to be seen. With the prospect of bad holding-ground and no shelter to speak of, we resolved on trying farther to the north, and therefore, without anchoring, made at once for Cape Klin, our original destination.

We kept within a mile or two of the land, expecting to arrive in an hour or less, for the distance between Capes Shipunsky and Klin was barely twelve miles by the chart. We found, however, that the distances were as little to be relied on as the outline of the coast, and we had logged thirty-six miles before stopping the
000 engines abreast of the cape. We rowed along the beach in vain in search of the game. Not a walrus was to be seen, but on nearing a little group of rocks we noticed a large mass lying upon the beach, and landed to find ourselves in the midst of a scene of slaughter which sufficiently accounted for the absence of our quarry. The crew of the schooner had evidently had good sport, for the shore was dotted here and there with the bodies of the slain, which were blown out to a gigantic size by decomposition. That there were still plenty of walrus in the neighbourhood was evident, for on our return to the ship the animals played in numbers around the boat; but, unlike the fur seal, they will not "haul up" on the shores where others of their species have been killed, and we had therefore to give up all hope of obtaining them at Cape Klin. The walrus restricts itself more or less to certain favourite spots for landing, and a random search for them along the coast would have been attended with but little success. It is nearly impossible to kill them in the water except by harpooning, for the only fatal shot—a small spot at the nape of the neck—is very rarely obtainable, and the animal, if struck there, usually sinks at once.

132 Our search having thus proved fruitless, there was nothing left
133 for us but to return to the neighbourhood of Cape Shipunsky, in the hope of obtaining some of the bighorn or mountain-sheep

132 which, according to Jacof Ivanovitch, were to be found there in
133 abundance. A few years previously he had visited Betchevinskaya Bay, a deep inlet ten miles to the west of the cape, and had shot several; and since, according to his account, both anchorage and shelter were to be had—a not unimportant consideration on such a coast—we again steered southward, and keeping a good offing during the night, ran in to the land and picked up our position off Cape Shipunsky at daybreak. The coast is steep-to, and as we passed close to the fine cliffs and headlands which oppose the by no means tranquil Pacific, there lay the *neiges d'antan* bewailed of Maistre François Villon,—huge patches of last year's snow, choking the gullies down to the water's edge. That they should have remained throughout the hot summer in a south-east aspect was astonishing, and gave some idea of the severity of the climate in these latitudes, but the absence of the usual autumnal rains no doubt in great measure accounted for it.

133 Before reaching our anchorage just within the entrance of the
137 bay, we could distinctly make out small herds of the animals of which we were in search on the slopes of the cliffs, which here rose to a height of five or six hundred feet, precipitous in some places, but in others forming a sort of under-cliff covered with brushwood. We lost no time in settling our plan of action. Judging that the bighorn were confined to the promontory near which we had anchored, we resolved upon surrounding it, sending four guns to the top of the cliff, whose sea-face extended east and west for a distance of about three miles, and posting two others upon the beach below. The former, ascending in rear from the shores of the bay, reached their destinations with some difficulty, the undergrowth being so dense and strong that, but for the bear-paths with which it was cut up in all directions, it would have been impenetrable. At the edge of the cliff progression was somewhat easier, and on looking over we found ourselves in close proximity to the game.
000 Owing to the excitability of Jacof, who had got some distance ahead, we began the day in a manner I hardly like to recall. The

000 wretched Russian, totally oblivious of the fact that the bighorn were possessed of quite as good eyes and ears as ourselves, danced wildly at the cliff's edge, shouting and gesticulating for us to come on. Struggling madly through the dense brushwood, hot, panting, minus portions of our clothing, and with rage at our hearts, we arrived just in time to get a couple of ineffectual shots as the game disappeared round a corner. My sporting readers will have little difficulty in realising our feelings; and as it was evident that Jacof's *forte* lay rather in hunting sables than other game, we at once sent him, like the unlucky commoner in Mr. Punch's aristocratic battue, to "take the chance of a hare back." We felt that after such a fiasco we could hardly expect or deserve success.

The fates, however, were more propitious than the most sanguine of us had dared to hope. Before mid-day I had bagged three bighorn, and, as I afterwards learnt, most of the other guns had been nearly as fortunate. Anxious to get the game on board before nightfall, I started for the yacht, and wishing to save myself the long round by the top of the cliff, attempted to cross an intervening belt of fir-scrub in order to reach some open grassy ground farther inland. I soon found that the task was far more difficult than I had imagined. The thicket was of old growth, and covered the ground breast-high, the surface everywhere being perfectly level. Contrary to what is usually seen near a coast, the branches grew seawards, and interlacing in every direction, formed a dense mat through which it was almost impossible to force one's way. I had barely gone ten yards before I became jammed in a position from which I extricated myself only with the very greatest difficulty. As I progressed the bush became, if anything, more impassable. Cumbered with a heavy rifle, and already somewhat tired with the morning's exertions, I got gradually more and more exhausted. My legs became constantly wedged in the forks of the branches which were too tough to break, and with my feet scarcely ever upon the ground, I fell again and again, lying where I fell from sheer fatigue. The little strip of bush was barely a hundred yards

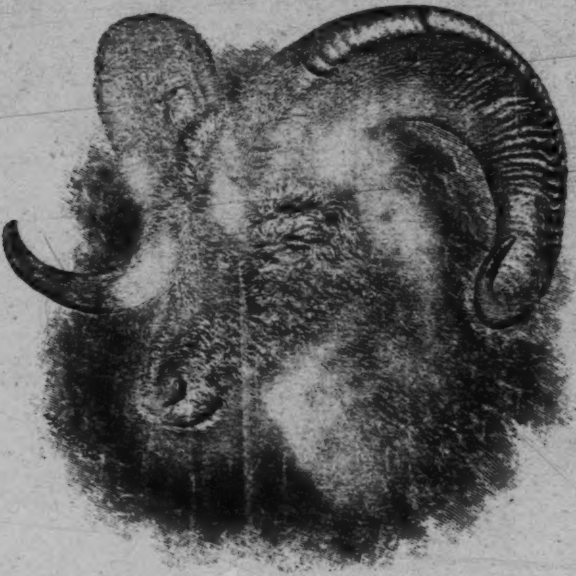
000 across, yet, absurd as it may seem to those of my readers who have had no experience of the denseness and impassability of the vegetation in these and similar regions, I more than once wondered if I should ever get through. I have certainly never been more completely exhausted than when I finished the last yard and rolled helplessly upon the grass on the other side.

After a rest on board the yacht I rowed along the coast to pick up the game, two of which had rolled down five or six hundred feet upon the beach below. Passing beneath the cliff at the entrance of the bay, we witnessed the death of a bighorn under unusual circumstances, for the animals are in general as sure-footed as a chamois. A couple of them had been driven into a corner by some of our party at the top of the cliff, but one broke back almost immediately. The other, perched on a little pinnacle at the edge of the precipice, seemed about to follow its comrade, but hesitated, turned, and ran back. As it did so its foot slipped. It checked itself for a moment, slipped again, made one desperate effort to regain its footing, and was over in an instant. The creature never moved a muscle as it fell, and hit the rocks four hundred feet below with a dull scrunching thud, breaking one of the massive horns short off, and converting the hind quarters into a shapeless, bleeding pulp.

Before dusk we had got on board no less than nine bighorn, and the yacht's decks were more like a butcher's shop at Christmas than anything else. We were busily engaged in measuring, skinning, and weighing during the evening, and when, wearied with the day's exertions, we turned in for a well-earned night's rest, we looked forward to the prospect of equally good sport on the morrow.

136 The general colour of the Kamschatkan Wild Sheep (*Ovis nivicola*, Eschscholtz) is a brownish grey, and the hair of those we obtained was very long and thick, so much so that we concluded that the animals had assumed their winter coat. The head and neck are more distinctly grey than the rest of the body, the forehead

136 is marked with an ill-defined dark patch, and the lips are nearly white. On the anterior aspect the legs are of a dark glossy brown, but posteriorly a narrow white line runs down the entire length of the limb. The tail is short and dark brown; the rump and the centre of the belly pure white. The ears are remarkably short.[1]



KAMSCHATKAN BIGHORN. (*Ovis nivicola.*)

The Bighorn in Kamschatka appears especially to frequent the

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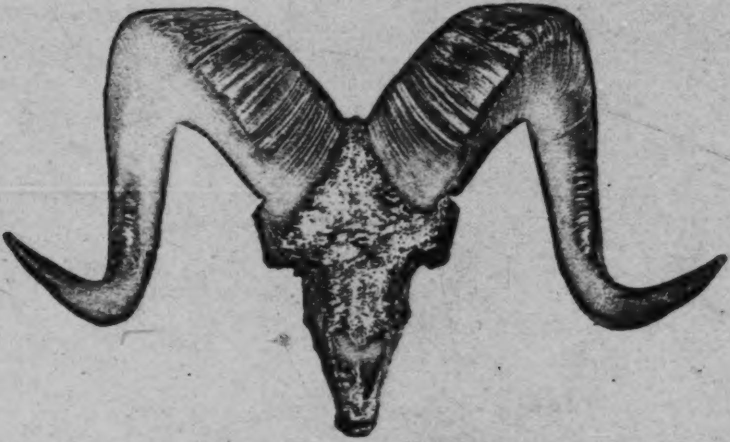
[1] Sir Victor and Mr. Basil Brooke in their article on Asiatic Sheep in the "Proceedings of the Zoological Society" (1875, p. 509), remark on the resemblance of the horns of this species to those of the American Bighorn (*Ovis montana*), with which, indeed, it has by some naturalists been regarded as identical. But the uniformly smaller size of the head, the shortness and great breadth of the skull in its anterior aspect, the slight development of the pre-orbital *fossa*, and the protuberance of the orbit itself, serve markedly to distinguish the Kamschatkan species. The horns are less rugose than those of *O. montana;* their frontal surface is convex; the orbital surface at first concave, then flat, thus causing the fronto-orbital edge to be very sharp. The nuchal surface is convex, and afterwards flattened, and the two remaining edges are rounded.

136 precipitous slopes of the sea-cliffs, though it is met with in some numbers in the interior of the peninsula. We had evidence of its occurrence in the mountain ranges near Gunal and Narchiki in the



SKULL OF *Ovis Nivicola.*

The following are the measurements obtained from a series of nine skulls :—

	INCHES.								
Length of skull	10½	10½	9¾	10¼	10¾	9¾	10½	10¼	...
Breadth between orbits . . .	5¾	5⅝	4⅝	5½	5¾	5½	5½	5¼	...
Length of horns round curve . .	35	34¾	24	32¼	35½	38	32½	26½	35
Circumference of horns at base .	13¼	14½	13	14	14	13½	13¾	12½	13¼
Horns from tip to tip . . .	21	25	17½	21	26⅞	26	22½	21½	25½

Measurements in the flesh of twelve specimens, all of which were adult males, were also taken, and are as follows :—

Supposed age (years)	3	3	5	5	5	5	6	6	6	6	6	6
Extreme length .	65½	63	62	64	64	66	66	65	66	66	67	67
Greatest girth . .	53	53	56	54	55	...	56½	...	54	53	54	55
Height at shoulder .	38	39	38	39½	37	...	40	41	40	37	40½	39

136 Bolcheresk Valley, and it probably exists at low altitudes on the great volcanoes near the mouth of the Kamschatka River. Every one of those we shot was a male,—their ages ranging, as far as we could judge, from three to six years. They kept in small herds of from three to nine individuals. As in the case of others of the same genus, the females and young males doubtless keep apart, but we were not fortunate enough to discover their habitat, neither could we obtain any information about them from the natives.[1]

Early next morning the most enthusiastic of our party proceeded in the lifeboat to the ground of the preceding day, hoping to add still further to the bag, while two of us started to explore the 133 magnificent harbour at the entrance of which we lay. Betche- 136 vinskaya Bay, the position and extent of which is but roughly indicated in the Russian charts, is a narrow inlet some five miles in depth, girt with precipitous cliffs of three or four hundred feet for the seaward third of its extent. At this point two low and narrow strips of beach run out from the base of the cliffs on either side, leaving a passage barely fifty yards in width in the very centre of the fjord, but deep enough to admit a vessel of the largest size. Within this the cliffs disappear, and an extensive and perfectly land-locked basin is entered, surrounded by high hills sloping gradually to the water's edge—as good a harbour as it is possible to imagine. Of the mode of formation of the two promontories I have just alluded to I can offer no explanation. They are so unnatural in appearance, and so closely resemble artificial breakwaters, as at once to attract the notice of the most careless observer. The long spit of beach running out at the entrance of Petropaulovsky harbour is of exactly similar formation, and the same phenomenon is said to occur at other places along the coast. Nature is not very lavish of her harbours on these shores, but the few that exist are excellent.

As we entered, the placid surface of the inner basin was dotted in every direction by the square black heads of seals, of which

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[1] Cf. article by the author *On Ovis nivicola*, "Proc. Zool. Soc.," 1885, p. 675.

133 there appeared to be enormous numbers. But as we intended to
136 try for bear at the head of the bay we left them in peace. The wind, however, sprang up and blew directly inland, and all chance of sport being under these circumstances reduced to a minimum, we reluctantly returned. That bear were very abundant in the neighbourhood was evident from the numberless fresh tracks, and from the fact that we saw seven in two days, but owing to their shyness and the dense undergrowth they frequent, they are not easy to shoot. We had therefore to turn our attention to the seals, whose skins Jacof seemed anxious to obtain. They were the ordinary *Phoca vitulina* of our own coasts, or a very closely-allied species.

Landing on the natural breakwater on our way back, we were astonished to find a spring of fresh water close to its extremity. The pools formed by it were covered with teal and other duck, and with these and a stray golden plover or two we had good sport. The place seemed to be a favourite resort of bears, who had formed
000 numerous paths to the spring; but ill-fortune once more attended us, and we had to be content with a distant view of one of these animals, who made off at full speed. We returned to the *Marchesa* to find that considerable additions had been made to the bag by the other party. Four more *Ovis nivicola* and a walrus had been killed, the latter carrying very fine tusks, nearly two feet in length. Hunting these creatures is after all but a sorry business. In order to afford sport an animal should either fight or run away. The poor walrus does neither—at least to any purpose—and having once killed one, no sportsman would care to repeat the performance.

I have been led to describe the events of our two days' visit to Betchevinskaya Bay as an illustration of the abundant sport to be obtained in Kamschatka. Our total bag consisted of one walrus, fourteen bighorn (one, falling in an inaccessible place, was not brought in), and some seals, besides teal, duck, and golden plover. Had we been ordinarily fortunate we should also have obtained two bears, which, though badly hit, managed, owing to the

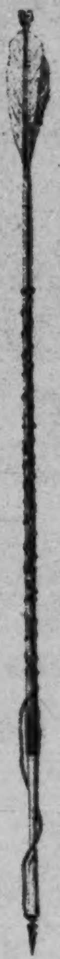
000 Long before the huge paw had descended in a futile effort at revenge the little rascal was safely under cover, on the look-out for another opportunity, and the bear might just as well have attempted to catch a mosquito. A more thorough little pickle never existed, but, like all pickles, he was very popular, and when one morning he disappeared never to return there was great lamentation among our men. We never learnt his fate. Probably Misky had caught his tormentor after many months of vain endeavour, and had dined off him.

We left Petropaulovsky on September 26th with the intention of visiting the coast towards Cape Lopatka. Even as far south as Avatcha Bay the nights had become bitterly cold, and warned us to take our departure if we meant to avoid the heavy gales that visit these latitudes at the onset of winter. We steamed out of the harbour over a sea so calm that the glare of golden light which lit up the western sky was reflected in its surface as in a mirror. Never had the bay and its grand volcanoes looked more beautiful, and we stood watching the blaze of colour fading over the yellow birch-clad hills and the lonely pyramids of snow beyond until the last ray of daylight had disappeared and the full moon had turned the landscape to a harmony in black and silver.

361 133 501 Next morning a thick fog hid the coast from view, but cleared as the sun got up, and we were able to pick up our position. About noon we found ourselves off an island abreast of the Itterna Volcano, and steaming into a bay close by, we scanned the coast for signs of a sea-otter-hunters' village, of whose existence we had heard through Afanasi. Not a trace of it was to be seen, and we were beginning to think that we had misinterpreted our directions when a couple of little canoes shot out from behind a point and paddled towards us at a great rate. As these neared the ship we saw that they were built somewhat on the model of a Greenlander's *kayack*, although not broader than the narrowest of Thames cedarwood canoes. How they can live in any ordinary sea is little short of miraculous, but we afterwards learnt from the people that two

501 or three boats invariably proceed in company when engaged in
133 hunting the sea-otter, and that during heavy weather they
361 lash them together with the paddles, by which means even
a moderate gale can be safely encountered.

The natives piloted us into a small bay which, protected as it was by an island[1] and a long reef running out from the mainland, afforded fairly good shelter in all winds. At the head of it stood the village, almost invisible at a little distance, composed entirely of underground yourts, whose smoke-begrimed interiors were not inviting to a European.
224 We had hoped to find many skins of the sea-otter here, but
411 were disappointed, the whole village only producing two; we
became possessors, however, of what, though less valuable, was of more interest,—the bow and arrows with which these animals are killed. The former is a tough piece of wood five or six feet in length, which is enormously strengthened by a band of plaited hide on the outer face, so tightly fixed as to give the bow when unstrung a curve in the opposite direction. The arrows are of wood for three-quarters of their length, fitted with feathers attached diagonally along the shaft, so as to produce a rotatory motion. The remaining portion is of walrus ivory, provided at the end with a socket, into which a barbed copper point is inserted. This is connected to the arrow by a long string of plaited sinew wound around the shaft. When the otter is hit, the barb, which is very loose, becomes at once detached, and if the animal gain the sea, its whereabouts is revealed by the arrow floating above it.



SEA-OTTER ARROW.

501 The canoes used by these people are of extremely graceful shape, and so light that they can be lifted in one hand with ease. They are constructed of a wooden skeleton

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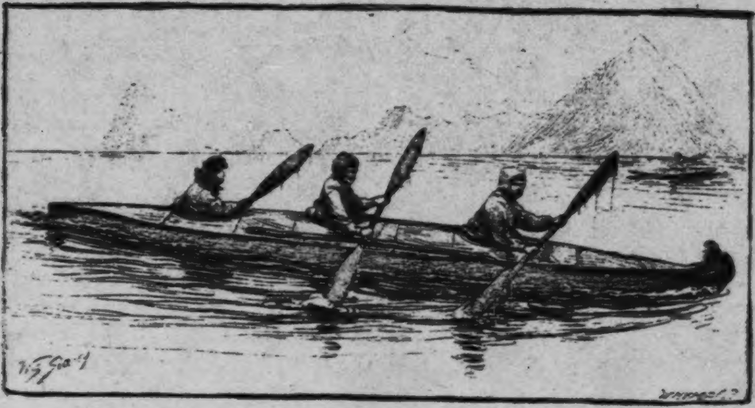
[1] This island, which is not marked in the chart, was named by us after Lieut. R. ff. Powell. It is in Lat. 51° 33′ N., Long. 157° 50′ E., and is about two miles in length. The coast at this part is placed too far to the eastward.

501 framework of the slightest possible description, covered with the skin of the Sea-Lion (*Eumetopias*), beautifully sewn. The circular opening for the occupant is very small, and the ingress of water is prevented by a sack-like skin apron which is tightly tied beneath the arms. These craft are astonishingly crank, so much so that one of our party, by no means a tyro in such matters, found the greatest possible difficulty in sitting one, even in smooth water. They are made in three sizes,—for one, two, or three persons.



OTTER-HUNTER'S CANOE, POWELL ISLAND.

000 We entered into negotiations for the purchase of one of these boats, as well as our want of a common language permitted. Vodky —the curse of Kamschatka—was the one idea of the natives, and we might doubtless have bought the craft, furnished with bow and arrows and all necessary gear, for three or four bottles of this spirit, had we felt inclined, for these people would sell their very souls for brandy were they only marketable commodities. The bargain was concluded eventually for thirty roubles, but though the dealing in money saved our consciences, it probably came to much the same in the end as if we ourselves had supplied the natives with spirit. Directly the snow was sufficiently hard for sledging, the owner of

000 the roubles would no doubt start for Petropaulovsky, and turn them into vodky without loss of time.

144 We could make out nothing about the nationality of the people of this village. We had been told that some Aleuts from the Bering group had settled in this neighbourhood, but it seems that the Kurile islanders have also passed northward, and established themselves on the coast near Cape Lopatka. To us it appeared that they did not differ appreciably from the Kamschatdale type, but the opinion of a mere passer-by on these matters is usually valueless. Nothing certain is at present known of the origin of the Kamschatdales and Koriaks—the aboriginal tribes of the peninsula. Both appear to have become greatly reduced in numbers since the Russian conquest. As a pure race the Kamschatdales are now rare, except on the western side of the country. The Koriaks rarely or never come south of the Tigil River. They are a nomad race like the Lapps, owning reindeer and living in movable tents, and, like them, coming down to the lower ground in winter. Both these tribes belong to the "Hyperborean" unclassified group, and Mr. Keane[1] considers the Koriak as probably the parent stock of the sub-arctic races of this part of the globe. Their language as shown by the vocabulary of M. de Lesseps, although bearing but a faint resemblance to the Kamschatdale, is closely allied to that of the Tchuktchi tribe in the region of the Anadyr, and it is possible that, ethnically as well as geographically, they form a connecting link between these two latter peoples.[2]

563 I am not aware that the presence of Lamuts in Kamschatka has ever been recorded by previous writers, but while on our journey through the country we were told by Afanasi Waren

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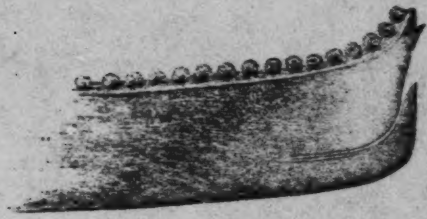
144 [1] "Asia." Stanford's Compendium of Geography and Travel.

[2] The accidental immigration of Japanese must be regarded as a not unimportant
167 factor in the composition of the Kamschatdale race. Short as is the period that has elapsed since the Russian conquest, it has furnished several instances, recorded by Krasheninikov, of Japanese junks having been driven from their course and wrecked on the shores of the peninsula. This chance peopling of the country has, no doubt, been going on for centuries, and it is probable that but few of the immigrants ever regained their native land.

563 who was well acquainted with both the Koriaks and Kamschatdales, that a small number of this race lived in the mountains in the heart of the peninsula. He described them as a fjell people, great hunters of *Ovis nivicola*, and owning reindeer, which they occasionally brought in for sale to Melcova and other places on the Kamschatka River. That the Lamuts, who are of Tungus race, should have established themselves in such an isolated position is curious, but we had no reason to doubt the accuracy of Afanasi's information. De Lesseps in his "Travels in Kamschatka" gives a vocabulary of the Lamut language, but, as he mentions nothing of this people in the peninsula, it is most probable that it was obtained in passing through their country in the neighbourhood of Okhotsk and the Judoma River, on his return to St. Petersburg.



BOW OF KURILE CANOE.

000 On the 27th we bade a final adieu to Kamschatka. We had more belief in the cold southerly current than in the continuation northwards of the Kurosiwo, of which we had vainly endeavoured to take advantage in our voyage from Japan; and we accordingly set our course for that country so as to keep a few miles only to the eastward of the Kurile chain. Had we known what was before us we should probably have given the land a wider berth. We had no idea that we were destined to come in for two gales and a typhoon before we reached the welcome shelter of Yedo Bay.

We steamed on quietly enough against light to moderate southerly winds until the morning of September 29th, when we experienced a gale from the south-east, which increased in force as the day wore on. At 6 P.M. we altered course, and stood in towards Simusir Island until midnight; a high sea running and the vessel pitching heavily. The wind then slackening somewhat, and veering

000 The history of the further conquest of Siberia is of no very great interest. Shortly after the arrival of the Czar's forces Yermac was surprised by a body of Kuchum Khan's adherents, and was drowned in his attempt to escape, and the Russians were for the time being driven out of the country. It was only for a brief period. They returned in greater strength, and rapidly reduced the Tartars to submission. Thenceforward their progress eastward was almost unchecked. The rude tribes were unable to stand against the superior discipline and arms of the more civilised nation, and in less than a century the Muscovite and the Celestial faced one another in the provinces of the Amoor. The hostilities that ensued were not of long duration. The Czar was wise enough to foresee that a protracted war with such a powerful nation as the Chinese could by no possibility end in his favour, and ultimately a treaty was signed at Nerchinsk in 1689, by which a system of commerce was established between the two nations, and the advance of the Russians checked in south-east Siberia.

175 R 177 .17 No such check had, however, occurred in the north-east, and even before the Nerchinsk Treaty[a] the Russians had established themselves[a] at Anadyrsk,—practically, although not actually, the Ultima Thule of the Asiatic continent. Here a fort was built, and a governor appointed, who was instructed to collect the tribute of furs from the natives, and to inform himself of the countries beyond and to the south of his district. At that time the half-fabulous Strait of Anian was the supposed boundary of Asia, and Kamschatka, of which the Russians had only dimly heard through the medium of the natives, was believed to be joined to the northern portion of Japan. The existence of Bering's Straits was not proved until nearly forty years later, but hardly a tenth of that time had elapsed before the Cossack troops had penetrated the peninsula and built a fort at Werchni Kamschatka, in the very heart of the country.

To whom the honour of the actual discovery of Kamschatka is due is a disputed point, but the claims of one Theodot, a Russian

[in 1689--analyst]

175 trader, seem to rest upon something more than mere tradition.
R This individual is said to have sailed down the Bova River to the
177 Polar Sea, and to have made his way thence by way of Bering's
.17 Straits to Kamschatka. Here he wintered, and in the following summer rounded the southern point of the peninsula, and entered the Sea of Okhotsk. He is said to have been killed by the Koriaks on his return overland to Anadyrsk, or to have died of scurvy, but the accounts of the expedition are both scanty and uncertain, and nothing was known of the country he was said to have discovered until the end of the seventeenth century.

In 1697 Vladimir Atlasov was sent from Yakutsk to take the command of the district of Anadyrsk, and in the following year he despatched Luke Moroskoi, a Cossack, with a guard of sixteen friendly natives, to collect the tribute from the country lying to the south. On their return they reported that they had penetrated the north of Kamschatka, and Atlasov, tempted by their description of the country, resolved on conquering it without delay. He accordingly started with a force of sixty Cossacks and about the same number of natives, and sending half under Moroskoi towards the Pacific, he marched southwards to the River Tigil. He met with but slight resistance from the Kamschatkans themselves, but his own natives revolted, and killing three of his Cossacks and wounding several others, they were with difficulty overpowered. Atlasov effectually prevented the recurrence of such an event by putting the remaining rebels to death, and notwithstanding the greatly reduced number of his followers, eventually reached Tigil, where he effected a junction with the second party under Moroskoi. The indomitable courage and resolution with which this mere handful of men ventured into the midst of a hostile nation, in a country which is one of the wildest and most impassable in the world, is worthy of the highest admiration. In spite of having reduced the tribes at the north of the peninsula, they had no thought of return. From Tigil they marched to the Kamschatka River, and ascending it almost to its source, built a fort upon its banks, 175 R 177 .17 where the village of Werchni Kamschatka now stands. This was garrisoned with fifteen Cossacks, and the remainder of the force returned in safety to Anadyrsk after an absence of two years.

The tribute obtained as the result of this expedition was a very valuable one, consisting of over three thousand sables in addition to other furs. This booty Atlasov himself conveyed to Moscow, and, as a reward for his services, was made Chief of the Cossacks at Yakutsk, and ordered to return at once to Kamschatka. Unfortunately for him, he fell into temptation by the way. A Russian merchant was unlucky enough to meet his party, and proved too tempting a morsel for the conqueror of the peninsula. The predatory instinct prevailed, and Atlasov eased him of the Chinese goods with which he was returning laden. Justice, however, seems in this case to have overtaken the delinquent rather more rapidly than is usual in the dominions of the Czar. He was at once seized and thrown into prison, where he remained for nearly five years.

During this period affairs in the newly-conquered country were by no means progressing as smoothly as might have been expected from the ease with which it had been annexed. Forts had been built both on the Yelofka River and where Nischni Kamschatka now stands, but the natives had given much trouble, and had killed several of the tax-gatherers, while the garrison of the upper fort, after remaining there for three years, had been murdered to a man on their homeward march to Anadyrsk. Upon the return of Atlasov, however,—for he had been invested with full authority, as before, on his release from prison in 1705,—a force was at once despatched to punish the rebels, and the Cossacks for the first time appear to have reached Avatcha Bay, where they encountered a body of eight hundred Kamschatdales. Certain of victory, the latter had provided themselves with ropes to secure their prisoners, but though the Cossacks were taken by surprise and greatly outnumbered, they eventually gained the day, and the natives were put to flight with great slaughter.

The Russians were now permanently established in the

175 peninsula, and as they had been much increased in strength by
R reinforcements sent from Yakutak, the tribute levied on the natives
177 became more valuable. But the lawless nature of the Cossacks
.17 effectually prevented a peaceful settlement of the country. Atlasov, who was probably no worse a character than his subordinates, openly appropriated the Government tribute, and was guilty of such gross cruelties to the natives and his own Cossacks that the latter seized and imprisoned him in 1707. Intelligence of the rebellion having reached the Yakutsk authorities, Peter Tcherekov was at once despatched to restore order, but the difficulties of travel and other causes combined to delay him, and it was not until two years later that he reached Kamschatka. Shortly afterwards he was joined by Joseph Mieronov, who had been sent to supersede him; and thus, in 1711, there were no less than three governors in the country at the same time. This *embarras* of rulers did not trouble the mutineers long. Tcherekov and Mieronov were murdered by their Cossack guard, and Atlasov met his fate at the hands of his own men—a punishment which, it must be confessed, he only too richly deserved.

The mutiny was indirectly the cause of further discoveries in the peninsula. The Cossacks became so afraid of the consequences of their crimes that they resolved, if possible, to expiate them in the eyes of the authorities by marching against the natives in the south-west, who had hitherto refused to pay tribute. At the same time they sent a letter to Yakutsk, accusing the murdered men of having systematically embezzled the tribute. Their expedition was completely successful. They descended the Bolchaia-reka, destroyed several of the fortified villages, killed great numbers of the natives, and finally built a fort upon the present site of the settlement of Bolcheresk. The natives were thus completely reduced, and the mutineers added further to the knowledge of the country by visiting the most northern of the Kurile Islands—on which no Russian had ever previously landed—and compelling the inhabitants to pay tribute.

175 R 177 .17 Onsiforov, the ringleader of the mutineers, returned to the Kamschatka River in 1712, and partly in consequence of these services, partly, no doubt, because of the strong force by which he was attended, his various misdeeds were passed over in silence, and he was again employed in expeditions against the natives. The country was at this time in a condition of the greatest insecurity. The Cossacks, under little or no control, killed and pillaged the Kamschatdales at every opportunity, and the tax-gatherers were constantly murdered in retaliation. Frequent mutinies took place, and from the state of anarchy into which the country had fallen, no tribute reached Yakutsk between the years 1707 and 1714. The exploration of the country nevertheless continued. More of the Kurile Islands were discovered, and in 1715 communication by sea was established between the ports of Okhotsk and Bolcheresk, which led to the discontinuance of the overland route to Yakutsk *viâ* Anadyrsk. Not only was the former far more direct and rapid, but it was also attended with much less risk; the attacks of the hostile Koriaks and Tchuktchis, which rendered the sledge journey extremely dangerous, being thereby avoided.

000 Hitherto the attention of the Russians had chiefly been engaged in the investigation of the country lying to the south of Anadyrsk. But the question of the continuity of Asia and America had long been occupying the mind of Peter the Great, who was at that time Czar, and he resolved that an expedition should be undertaken with that aim. Accordingly, with his own hand, he drew up instructions, in which he ordered that ships should be constructed in Kamschatka, that they should direct their course northwards with the object of setting at rest the question of the existence of a strait between the two continents, and that they should endeavour to extend the Russian dominions wherever possible. Before further action had been taken the reign of Peter the Great was terminated by death, but the Empress Catherine, on coming to the throne, at once proceeded to carry out the instructions of the Czar. In 1725 the first expedition started, and Bering

commenced his career as a discoverer, which was destined sixteen years later to be brought to such a melancholy end on the island that now bears his name.

Vitus Bering, a Dane born in Jutland in 1680, who had been for many years in the Russian service, was chosen as leader of the expedition. He had already made voyages both in the East and West Indies before seeking his fortune under the Czar, and had afterwards made himself conspicuous during the Swedish war, for which he had been promoted. Martin Spangberg and Alexei Tschirikov accompanied him as lieutenants, and the party, having been provided with a number of skilled workmen for the construction of the vessels upon their arrival in Kamschatka, set out from St. Petersburg on the 5th of February, 1725. The spring and summer were passed in making their way eastward by the Irtish, Obi, and Yenisei, and they finally went into winter quarters at Ilimsk to the north of Lake Baikal, where they collected stores in readiness for the continuing of their journey on the breaking up of the ice. The spring of 1726 found them at Yakutsk, where, owing to the difficulties of the roads and lack of sufficient transport, they were obliged to divide forces in order to reach Okhotsk. Spangberg took the river route by the Aldan, Maja, and Judoma with the heavy baggage; Bering went by land; and Alexei Tschirikov followed later with the rest of the enormous supply of provisions, with which the nature of the country whence they were to sail obliged them to burden themselves. Bering reached his destination safely, but misfortune befell the river party from the very beginning. Owing to the weight of their baggage and the rapidity of the current, the ascent of the stream was a matter of much greater difficulty than had been anticipated, and at the end of October Spangberg was caught by the ice in the Judoma River, and compelled to undertake the rest of the journey by land. Not only was the duration of the expedition thus much lengthened, but the party underwent such terrible privations that they were reduced to living upon their boots and leathern belts. It was not until July, 000 1727, that the whole of the *personnel* and baggage of the expedition were once more together in Okhotsk.

Meanwhile Bering, who had arrived in the previous summer, had not been idle. The route by sea across the Gulf of Okhotsk to Bolcheresk had been decided on, but there was no vessel in which to make the passage. Undaunted by the difficulties which encountered him, Bering set to work to build a craft with the aid of the carpenters he had brought with him from Russia. It was christened the *Fortune*, and at the end of June was ready to convey the first detachment of the expedition to Kamschatka. This consisted of the shipbuilders and others needed for the construction of the vessel intended for his great voyage, and on their arrival at Bolcheresk they at once proceeded to the mouth of the Kamschatka River, where she was to be built. Bering himself followed later, and travelling by dog-sledge, ultimately reached Nischni Kamschatka at the close of the year. The winter was employed in the preparation of timbers for the vessel; her construction proceeded rapidly during the spring, and on the 20th of July, 1728—three years and a half after the expedition had left St. Petersburg—Bering's first voyage of discovery commenced.

The results of that voyage are too well known to need a lengthy repetition. Clearing the mouth of the Kamschatka River, the course of the *Gabriel* was set to the north-east along the Asiatic coast, which was roughly charted. On the 10th of August the island of St. Lawrence was discovered, and five days later they rounded a cape in Lat. 67° 18′ N.,—now Cape Serdze Kamen. Here the coast trended suddenly to the west, and concluding from this, and from the fact that no land was to be seen to the north, that he had proved the existence of a strait between the two great continents, Bering ordered the return. On the 20th of September the *Gabriel* once more entered the mouth of the Kamschatka River.

For the second time the members of the expedition went into winter-quarters at Nischni Kamschatka, resolving, if possible, again

000 to examine the shores of the supposed straits as soon as they should be free of ice in the following summer. They left the river for this object on the 5th of June, 1729, but owing to the continued prevalence of strong north-east winds, against which the *Gabriel* could make no headway, the main idea of the voyage was abandoned, and Bering made for Okhotsk, whence he proceeded overland to St.
175 Petersburg. His second voyage was thus neither successful nor
R disastrous. The third, and final one, was both.

It was during the absence of Bering that an event occurred
177 which, but for a fortunate accident, would in all probability have
.17 resulted in the murder of every Russian in Kamschatka. The natives had for a long time cherished the idea of ridding themselves of their conquerors by a preconcerted rising throughout the country. In 1731 a more favourable opportunity presented itself than they could have anticipated. The departure of Bering and his people had cleared the Kamschatka of the most formidable body of their enemies, and the Russian forces in the peninsula had been still further weakened by the absence of a great number of Cossacks, who, under Captain Paulutsky, had been sent to the north to suppress a rebellion of the Tchuktchis. At the same time the commissary Shacurdin sailed from the Kamschatka River for Anadyrsk in charge of the annual tribute. The moment was seized by the Kamschatdales, who throughout the country were in readiness for the revolt. They sailed up the river, killing every Cossack they encountered, and Nischni Kamschatka was carried in the night by surprise. Every soul was massacred, with the exception of two or three who made their escape under cover of the darkness, and paddling down the river, eventually reached the coast. Here, to their great joy, they found the two vessels which had left for Anadyrsk, but had been compelled to return by strong head winds. Measures were immediately taken to regain possession of the fort. The leaders of the rebellion were Harchin —a Toyune or chief of the Yelofka River district—and a Kluchi Kamschatdale named Chugotchi. The village of Nischni had fallen

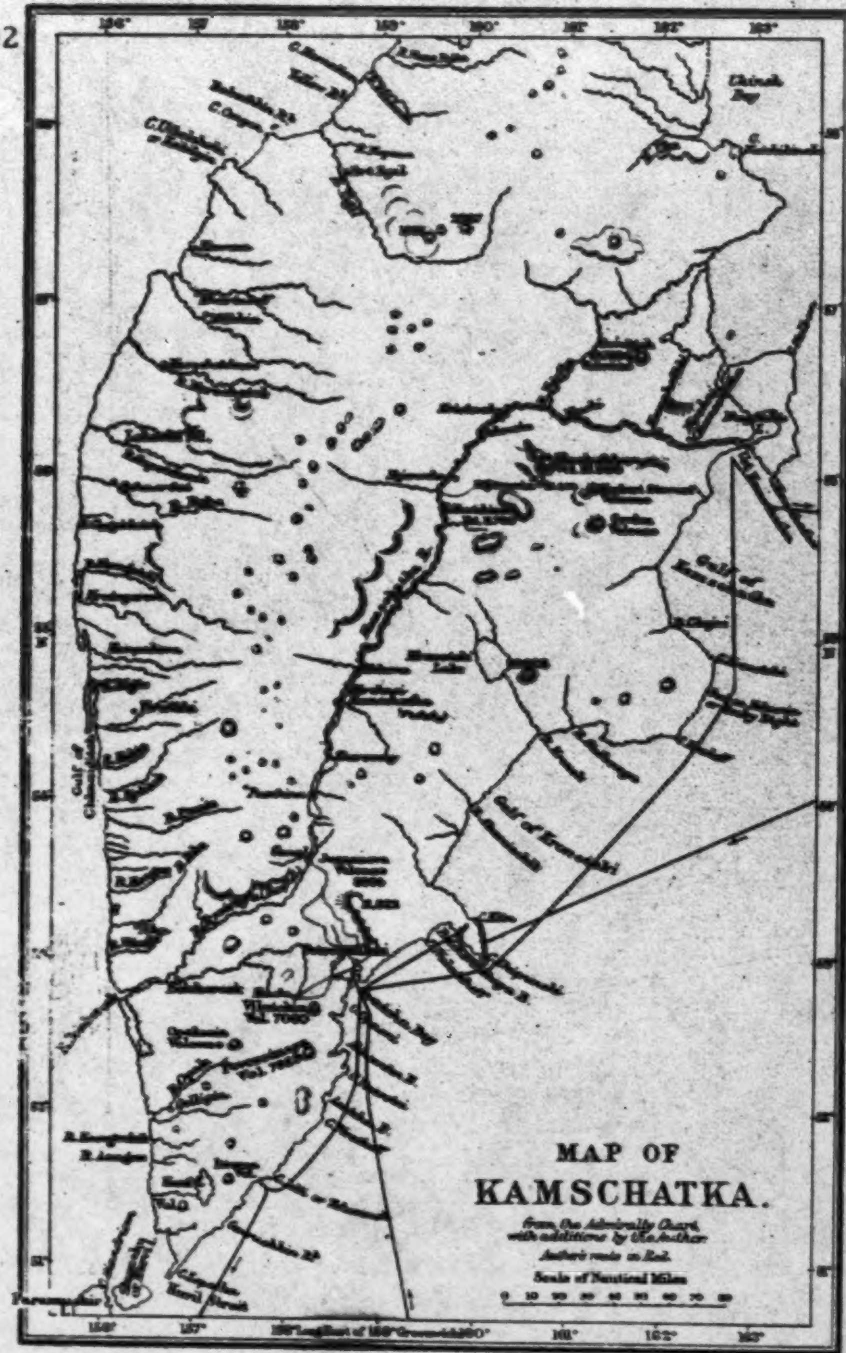
175 R 177 .17 to Harchin's forces, and Chugotchi, having murdered all the Russians in his own district, marched to join him. Hearing of the return of Shacurdin's ships, they entrenched themselves in the fort and awaited the Russian attack. It would have been better for them had they accepted the terms offered by their opponents, but they refused to surrender. The place was retaken with great slaughter. Hardly a man escaped alive, and thus the revolt, which at one time bid fair to spread throughout the peninsula, was checked almost at its outset. It was the last struggle engaged in by the natives, and thenceforward the country remained in a condition of uninterrupted peace.

000 It was not until 1732 that proposals were made for the despatch of another exploring expedition to the far east. They emanated from Bering himself, who, with his two lieutenants Spangberg and Tschirikov, was anxious to push across to the American coast, and trace it northward to the strait that now bears his name. Another point too remained to be elucidated. To the south-east of Kamschatka in the charts of Delisle and others of that day an appearance of land was indicated, and described "*Terre vue par Jean de Gama, Indien, en allant de la Chine à la nouvelle Espagne.*" It was intended to search for this mythical land before proceeding to America,—an intention that, unluckily for the fate of the explorer and his comrades, was ultimately carried out,—and emboldened by the success of his earlier voyages, Bering ventured to lay his proposals before the Empress.

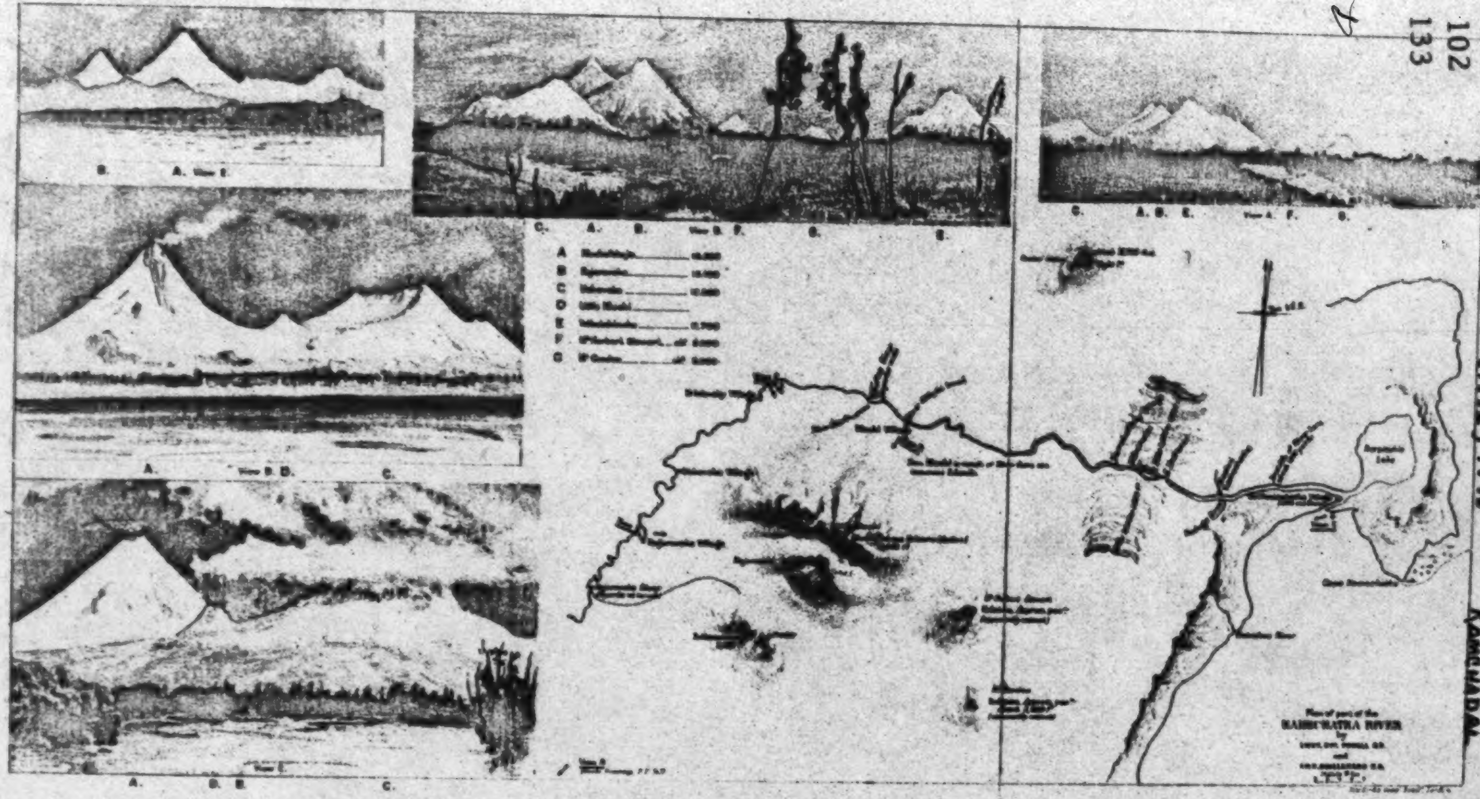
They were at once acceded to, and Anne, who appears to have been as anxious to extend the dominions of Russia as her predecessor, resolved upon a simultaneous system of exploration over a vast extent of country. Special attention was to be directed to the possibilities of a north-east passage along the coasts of the Polar Sea. Eight additional lieutenants were appointed, of whom three were to be engaged in this work. Spangberg was to proceed to Okhotsk, where two ships were to be built to enable him to reach Japan, while the two needed for Bering's voyage were also to be

MAPS.

1. Track Chart of the "Marchesa's" Voyage . . *to face page* 1
2. Map of Formosa . . . . „ 4
3. Map of Kamschatka. . . . . . „ 67
4. Sketch Survey of Lower Part of Kamschatka River „ 158
5. Outline Map to show Position of Seal Islands . „ 190


MAP OF
KAMSCHATKA.
from the Admiralty Chart, with additions by the Author.
Author's route in Red.
Scale of Nautical Miles
0 10 20 30 40 50 60 70 80
Chinak Bay
Gulf of Kronotski
Kuril Strait
156° 157° 158° Longitude of Greenwich 160° 161° 162° 163°

Stanford's Geog.l Estab.t London.



View E
View D
View A
A
B
C
D
E
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G
Plan of part of the
KAMSCHATKA RIVER
by

22: Guillemard T-2 (1882) 1886 Kamchadal

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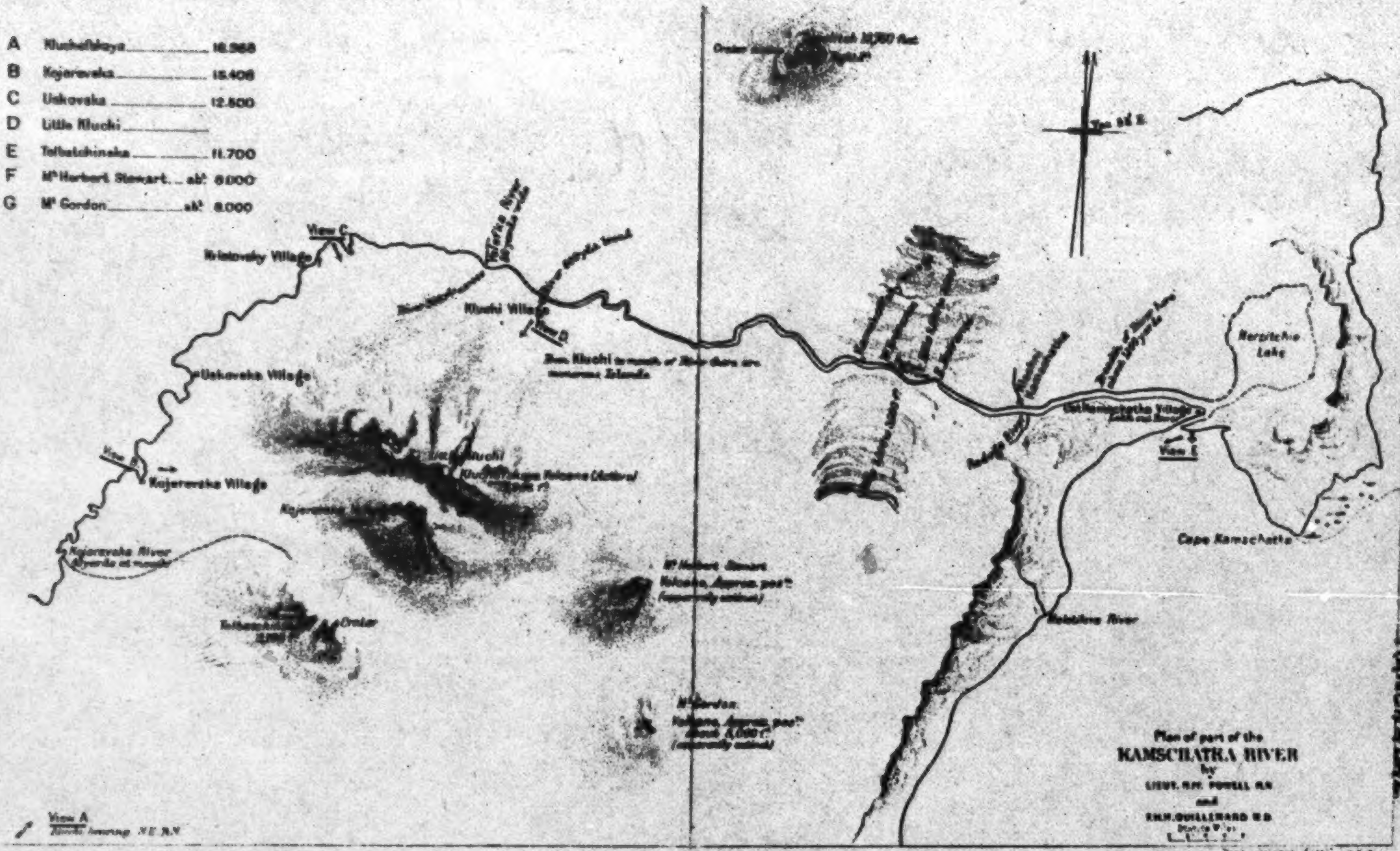
22: GUILLEMARD T-2 (1882) 1886 KAMCHADAL


A Kluchefskaya 16.968
B Kojerevska 15.406
C Ushkovska 12.500
D Little Kluchi
E Tolbatchinska 11.700
F Mt Herbert Stewart ab.t 6.000
G Mt Gordon ab.t 8.000
View C
Kristovsky Village
Kluchi Village
View D
Ushkovska Village
View B
Kojerevska Village
Kojerevska River
Little Kluchi
Crater
Mt Herbert Stewart Volcano
Mt Gordon
Crater
Kamschatka Village
View E
Nerpitchie Lake
Cape Kamschatka
Kobakhina River
View A

Plan of part of the
KAMSCHATKA RIVER
by
LIEUT. H.M. POWELL R.N.
and
F.H.H. GUILLEMARD M.D.